

Untitled

SEQUENCE LISTING

<110> Pauli, Benedict U.

<120> Calcium-activated chloride channel proteins and their use in anti-metastatic therapy

<130> 18617.new

<140>

<141> 2004-02-17

<150> US/60/065,922

<151> 1997-11-17

<160> 63

<210> 1

<211> 3317

<212> DNA

<213> Unknown

<220>

<223> sequence encoding Lu-ECAM-1 and Lu-ECAM-1 associated protein from bovine endothelial cells

<400> 1

ggattccagg gtctccagca ttgcctgaat ctggatgttag gtttactgtta 50

acatgtgcaa aa atg gtg ctc tgt ctg aat gtt att ctg ttc cta act 98

ttg cat ctc ttg cct gga atg aaa agt tca atg gta aat ttg att 143

aac aat ggg tat gat ggc att gtc att gca att aac ccc agt gtg 188

cca gaa gat gaa aaa ctc att gaa aac ata aag gaa atg gta act 233

gaa gct tct act tac ctg ttt cat gcc acc aaa cga aga gtt tat 278

ttc agg aat gtg agc att tta att cca atg acc tgg aaa tca aaa 323

tct gag tac ttc ata cca aaa caa gaa tca tat gac cag gca gat 368

gtc ata gtt gct aat ccc tat cta aaa tat gga gat gat ccc tat 413

aca ctt caa tat gga agg tgt gga gaa aaa gga aaa tat ata cat 458

ttt act cca aac ttc ttg ttg act aat aat ttc cac atc tat ggg 503

Pauli sequence.txt

tcc cga ggc aga gta ttt gtc cat gag tgg gcc cat ctc cgc tgg	548
gga ata ttt gat gag tat aat gtg gac cag cca ttc tat att tcc	593
aga aag aac act att gaa gca aca aga tgt tca act cat att act	638
ggt att aat gtg gtt ttc aag aaa tgc cct gga ggc agc tgt ata	683
aca agt cta tgc aga cgt gac tca cag aca ggg ctg tat gaa gca	728
aaa tgt aca ttc ctt cca aaa aaa tcc cag act gca aag gaa tcc	773
att atg ttt atg cca agt ctc cat tct gtg act gaa ttt tgt aca	818
gaa aaa aca cac aat aca gaa gct cca aac cta caa aac aaa atg	863
tgc aat ggc aaa agc aca tgg gat gta atc atg aac tct gtt gac	908
ttt cag aat aca tct ccc atg aca gaa atg aat cca ccg act cat	953
cct aca ttt tca ttg ctc aag tcc aaa cag cgg gta gtc tgt ttg	998
gta ctt gat aaa tct gga agc atg tct gca gaa gac cgt ctc ttt	1043
caa atg aat caa gca gca gaa cta tac ttg att caa gtt att gaa	1088
aag gga tct tta gtt ggg atg gtt aca ttt gac agt gtt gct gaa	1133
atc caa aat cat cta aca aga ata act gat gat aat gtt tac caa	1178
aag atc acc gca aaa ctg cct caa gta gct aat ggt gga act tca	1223
att tgt aga ggg ctc aaa gca gga ttc cag gca att atc cac agt	1268
gac cag agt act tct ggt tct gaa atc ata cta tta act gat ggg	1313
gaa gat aat gaa ata aat tca tgc ttt gag gat gta aaa cga agt	1358
ggt gca atc atc cac acc att gct ctg gga ccc tct gct gcc aaa	1403
gaa ctg gag aca ttg tca aat atg aca gga gga tat cgt ttt ttt	1448
gcc aat aaa gac ata act ggc ctt act aat gct ttc agt aga att	1493
tca tct aga agt gga agc atc act cag cag gct att cag ttg gaa	1538
agc aaa gcc ttg aaa att aca gga agg aaa aga gta aac ggc aca	1583

Pauli sequence.txt

gtg cct gta gac agt aca gtt gga aat gac act ttc ttt gtt gtc	1628
aca tgg aca ata caa aaa cca gaa att gtt ctc caa gat cca aaa	1673
gga aag aaa tat aaa acc tcg gat ttc aaa gaa gat aag tta aat	1718
att cga tct gct cgt ctg caa ata cct ggt att gca gag aca ggt	1763
act tgg act tac agc ctt cta aat aat cat gcc agc tct caa atg	1808
cta aca gtg aca gtg acc act cga gca aga agt cct act ata ccc	1853
cca gta att gca aca gct cac atg agt caa cat aca gca cat tat	1898
cct agc cca atg att gtt tat gca caa gtc agt caa ggg ttt ttg	1943
cct gta ctg gga atc agt gta ata gcc att ata gaa acc gaa gat	1988
gga cat caa gta aca ttg gag ctc tgg gac aat ggt gca ggt cgt	2033
gat act gtc aag aat gat ggc atc tac tca aga tac ttt aca gat	2078
tac tat gga aat ggt aga tac agt tta aaa gta cat gca cag gca	2123
aga aac aac acg gct agg cta aat tta aga caa cca cag aac aaa	2168
gtt cta tat gtt cca ggc tac gtt gaa aac ggt aaa att ata ctg	2213
aac cca ccc aga cct gaa gtc aaa gat gac ctg gca aaa gct aaa	2258
ata gaa gac ttt agc aga cta acc tct gga ggg tca ttt act gta	2303
tca gga gct cct cct ggt aat cac cct tct gtg ttc cca ccc	2348
agt aaa att aca gat ctt gag gct aag ttc aaa gaa gat tat att	2393
caa ctt tca tgg aca gcc cct ggc aat gtc cta gat aaa gga aaa	2438
gcc aac agc tac att ata aga ata agt aag agt ttc atg gat cgt	2483
caa gaa gat ttt gac aat gcg act tta gtg aat act tct aat cta	2528
ata cct aag gag gcc gga tca aaa gaa aat ttt gaa ttt aag cca	2573
gaa cat ttt aga gta gaa aat ggc acc aaa ttc tat att tca gtc	2618
caa gcc atc aac gaa gcc aat ctc atc tca gag gtt tct cac att	2663

Pauli sequence.txt

gta caa gca atc aaa ttt att cct cta cca gaa gac agt gtc cat	2708
gat ctg ggt acc aag att tct gaa atc act ctg gca att tta gga	2753
tta cca atg att ttc tct gta ttt taaaacttagga attgtgtcag	2797
cactgataac caatgttata catagtttgtt acacatttat ttaggattta	2847
attcgctatt ttcttggttct tcagtagcta aattgtgtcc aaccttgcga	2897
ctgcaggact gcagcatgcc aggtttccct gtccatcacc aactcccaga	2947
gcttgctcaa atccatgttc atttgagtca gtaatgctaa ctatctcatc	2997
ctctactgcc ctcttctctg tttaccttca atctttcccc agcatttagga	3047
tctttccaa tgagtcagct cttagcatcg ggtggccaaa atattggcat	3097
tttcagcaac agttcttcaa atgaaatatc cagggtgatt ttcttttagga	3147
tagactggtg actgacagtt caagggacac tctggagtct tctccagcac	3197
cgcaccgcag tttgaaagaa ccagttctt ggtactcagc cttctttata	3247
gtccaatgct cacatctatc atgactcctg gaaaaaccat agctttgaga	3297
aatggatctt tgttggaaaa	3317

<210> 2

<211> 905

<212> PRT

<213> Unknown

<220>

<223> Lu-ECAM-1 precursor from bovine endothelial cells

<400> 2

Met Val Leu Cys Leu Asn Val Ile Leu Phe Leu Thr Leu His Leu		
-20	-15	-10

Leu Pro Gly Met Lys Ser Ser Met Val Asn Leu Ile Asn Asn Gly		
-5	1	5

Tyr Asp Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp		
10	15	20

Pauli sequence.txt

Glu Lys Leu Ile Glu Asn Ile Lys Glu Met Val Thr Glu Ala Ser
25 30 35

Thr Tyr Leu Phe His Ala Thr Lys Arg Arg Val Tyr Phe Arg Asn
40 45 50

Val Ser Ile Leu Ile Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr
55 60 65

Phe Ile Pro Lys Gln Glu Ser Tyr Asp Gln Ala Asp Val Ile Val
70 75 80

Ala Asn Pro Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu Gln
85 90 95

Tyr Gly Arg Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro
100 105 110

Asn Phe Leu Leu Thr Asn Asn Phe His Ile Tyr Gly Ser Arg Gly
115 120 125

Arg Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe
130 135 140

Asp Glu Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Lys Asn
145 150 155

Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr Gly Ile Asn
160 165 170

Val Val Phe Lys Lys Cys Pro Gly Gly Ser Cys Ile Thr Ser Leu
175 180 185

Cys Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr
190 195 200

Phe Leu Pro Lys Lys Ser Gln Thr Ala Lys Glu Ser Ile Met Phe
205 210 215

Met Pro Ser Leu His Ser Val Thr Glu Phe Cys Thr Glu Lys Thr
220 225 230

His Asn Thr Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Gly
235 240 245

Lys Ser Thr Trp Asp Val Ile Met Asn Ser Val Asp Phe Gln Asn
250 255 260

Pauli sequence.txt

Thr Ser Pro Met Thr Glu Met Asn Pro Pro Thr His Pro Thr Phe
265 270 275

Ser Leu Leu Lys Ser Lys Gln Arg Val Val Cys Leu Val Leu Asp
280 285 290

Lys Ser Gly Ser Met Ser Ala Glu Asp Arg Leu Phe Gln Met Asn
295 300 305

Gln Ala Ala Glu Leu Tyr Leu Ile Gln Val Ile Glu Lys Gly Ser
310 315 320

Leu Val Gly Met Val Thr Phe Asp Ser Val Ala Glu Ile Gln Asn
325 330 335

His Leu Thr Arg Ile Thr Asp Asp Asn Val Tyr Gln Lys Ile Thr
340 345 350

Ala Lys Leu Pro Gln Val Ala Asn Gly Gly Thr Ser Ile Cys Arg
355 360 365

Gly Leu Lys Ala Gly Phe Gln Ala Ile Ile His Ser Asp Gln Ser
370 375 380

Thr Ser Gly Ser Glu Ile Ile Leu Leu Thr Asp Gly Glu Asp Asn
385 390 395

Glu Ile Asn Ser Cys Phe Glu Asp Val Lys Arg Ser Gly Ala Ile
400 405 410

Ile His Thr Ile Ala Leu Gly Pro Ser Ala Ala Lys Glu Leu Glu
415 420 425

Thr Lys Ser Asn Met Thr Gly Gly Tyr Arg Phe Phe Ala Asn Lys
430 435 440

Asp Ile Thr Gly Leu Thr Asn Ala Phe Ser Arg Ile Ser Ser Arg
445 450 455

Ser Gly Ser Ile Thr Gln Gln Ala Ile Gln Leu Glu Ser Lys Ala
460 465 470

Leu Lys Ile Thr Gly Arg Lys Arg Val Asn Gly Thr Val Pro Val
475 480 485

Asp Ser Thr Val Gly Asn Asp Thr Phe Phe Val Val Thr Trp Thr
490 495 500

Pauli sequence.txt

Ile Gln Lys Pro Glu Ile Val Leu Gln Asp Pro Lys Gly Lys Lys
505 510 515

Tyr Lys Thr Ser Asp Phe Lys Glu Asp Lys Leu Asn Ile Arg Ser
520 525 530

Ala Arg Leu Gln Ile Pro Gly Ile Ala Glu Thr Gly Thr Trp Thr
535 540 545

Tyr Ser Leu Leu Asn Asn His Ala Ser Ser Gln Met Leu Thr Val
550 555 560

Thr Val Thr Thr Arg Ala Arg Ser Pro Thr Ile Pro Pro Val Ile
565 570 575

Ala Thr Ala His Met Ser Gln His Thr Ala His Tyr Pro Ser Pro
580 585 590

Met Ile Val Tyr Ala Gln Val Ser Gln Gly Phe Leu Pro Val Leu
595 600 605

Gly Ile Ser Val Ile Ala Ile Ile Glu Thr Glu Asp Gly His Gln
610 615 620

Val Thr Leu Glu Leu Trp Asp Asn Gly Ala Gly Arg Asp Thr Val
625 630 635

Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe Thr Asp Tyr Tyr Gly
640 645 650

Asn Gly Arg Tyr Ser Leu Lys Val His Ala Gln Ala Arg Asn Asn
655 660 665

Thr Ala Arg Leu Asn Leu Arg Gln Pro Gln Asn Lys Val Leu Tyr
670 675 680

Val Pro Gly Tyr Val Glu Asn Gly Lys Ile Ile Leu Asn Pro Pro
685 690 695

Arg Pro Glu Val Lys Asp Asp Leu Ala Lys Ala Lys Ile Glu Asp
700 705 710

Phe Ser Arg Leu Thr Ser Gly Gly Ser Phe Thr Val Ser Gly Ala
715 720 725

Pro Pro Pro Gly Asn His Pro Ser Val Phe Pro Pro Ser Lys Ile
730 735 740

Pauli sequence.txt

Thr Asp Leu Glu Ala Lys Phe Lys Glu Asp Tyr Ile Gln Leu Ser
745 750 755

Trp Thr Ala Pro Gly Asn Val Leu Asp Lys Gly Lys Ala Asn Ser
760 765 770

Tyr Ile Ile Arg Ile Ser Lys Ser Phe Met Asp Arg Gln Glu Asp
775 780 785

Phe Asp Asn Ala Thr Leu Val Asn Thr Ser Asn Leu Ile Pro Lys
790 795 800

Glu Ala Gly Ser Lys Glu Asn Phe Glu Phe Lys Pro Glu His Phe
805 810 815

Arg Val Glu Asn Gly Thr Lys Phe Tyr Ile Ser Val Gln Ala Ile
820 825 830

Asn Glu Ala Asn Leu Ile Ser Glu Val Ser His Ile Val Gln Ala
835 840 845

Ile Lys Phe Ile Pro Leu Pro Glu Asp Ser Val His Asp Leu Gly
850 855 860

Thr Lys Ile Ser Glu Ile Thr Leu Ala Ile Leu Gly Leu Pro Met
865 870 875

Ile Phe Ser Val Phe
880 884

<210> 3

<211> 203

<212> PRT

<213> Unknown

<220>

<223> Lu-ECAM-1 associated protein from bovine endothelial cells

<400> 3

Val Leu Tyr Val Pro Gly Tyr Val Glu Asn Gly Lys Ile Ile Leu
1 5 10 15

Asn Pro Pro Arg Pro Glu Val Lys Asp Asp Leu Ala Lys Ala Lys
20 25 30

Ile Glu Asp Phe Ser Arg Leu Thr Ser Gly Gly Ser Phe Thr Val
35 40 45

Pauli sequence.txt

Ser Gly Ala Pro Pro Pro Gly Asn His Pro Ser Val Phe Pro Pro
50 55 60

Ser Lys Ile Thr Asp Leu Glu Ala Lys Phe Lys Glu Asp Tyr Ile
65 70 75

Gln Leu Ser Trp Thr Ala Pro Gly Asn Val Leu Asp Lys Gly Lys
80 85 90

Ala Asn Ser Tyr Ile Ile Arg Ile Ser Lys Ser Phe Met Asp Arg
95 100 105

Gln Glu Asp Phe Asp Asn Ala Thr Leu Val Asn Thr Ser Asn Leu
110 115 120

Ile Pro Lys Glu Ala Gly Ser Lys Glu Asn Phe Glu Phe Lys Pro
125 130 135

Glu His Phe Arg Val Glu Asn Gly Thr Lys Phe Tyr Ile Ser Val
140 145 150

Gln Ala Ile Asn Glu Ala Asn Leu Ile Ser Glu Val Ser His Ile
155 160 165

Val Gln Ala Ile Lys Phe Ile Pro Leu Pro Glu Asp Ser Val His
170 175 180

Asp Leu Gly Thr Lys Ile Ser Glu Ile Thr Leu Ala Ile Leu Gly
185 190 195

Leu Pro Met Ile Phe Ser Val Phe
200 203

<210> 4
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 4
aatttaagcc agaacatttt agagta 26

<210> 5
<211> 23

Pauli sequence.txt

<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 5
gaaaatggca ccaaattcta tat 23

<210> 6
<211> 23
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 6
atatagaatt tggtgccatt ttc 23

<210> 7
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 7
tagaaagtatt cactaaagt 19

<210> 8
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Amplification primer

<400> 8
tactgtctac aggcaactgtg ccgtttac 28

<210> 9
<211> 18
<212> DNA
<213> Artificial sequence

<220>

Pauli sequence.txt

<223> Amplification primer

<400> 9
ggaatatttg atgagtat 18

<210> 10
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 10
attcatttga aagagacg 18

<210> 11
<211> 795
<212> PRT
<213> Unknown

<220>
<223> Variant of Lu-ECAM-1 from bovine endothelial cells

<400> 11
Met Val Leu Cys Leu Asn Val Ile Leu Phe Leu Thr Leu His Leu
-20 -15 -10

Leu Pro Gly Met Lys Ser Ser Met Val Asn Leu Ile Asn Asn Gly
-5 1 5

Tyr Asp Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp
10 15 20

Glu Lys Leu Ile Glu Asn Ile Lys Glu Met Val Thr Glu Ala Ser
25 30 35

Thr Tyr Leu Phe His Ala Thr Lys Arg Arg Val Tyr Phe Arg Asn
40 45 50

Val Ser Ile Leu Ile Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr
55 60 65

Phe Ile Pro Lys Gln Glu Ser Tyr Asp Gln Ala Asp Val Ile Val
70 75 80

Ala Asn Pro Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu Gln
85 90 95

Pauli sequence.txt

Tyr Gly Arg Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro
100 105 110

Asn Phe Leu Leu Thr Asn Asn Phe His Ile Tyr Gly Ser Arg Gly
115 120 125

Arg Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe
130 135 140

Asp Glu Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Lys Asn
145 150 155

Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr Gly Ile Asn
160 165 170

Val Val Phe Lys Lys Cys Pro Gly Gly Ser Cys Ile Thr Ser Leu
175 180 185

Cys Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr
190 195 200

Phe Leu Pro Lys Lys Ser Gln Thr Ala Lys Glu Ser Ile Met Phe
205 210 215

Met Pro Ser Leu His Ser Val Thr Glu Phe Cys Thr Glu Lys Thr
220 225 230

His Asn Thr Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Gly
235 240 245

Lys Ser Thr Trp Asp Val Ile Met Asn Ser Val Asp Phe Gln Asn
250 255 260

Thr Ser Pro Met Thr Glu Met Asn Pro Pro Thr His Pro Thr Phe
265 270 275

Ser Leu Leu Lys Ser Lys Gln Arg Val Val Cys Leu Val Leu Asp
280 285 290

Lys Ser Gly Ser Met Ser Ala Glu Asp Arg Leu Phe Gln Met Asn
295 300 305

Gln Ala Ala Glu Leu Tyr Leu Ile Gln Val Ile Glu Lys Gly Ser
310 315 320

Leu Val Gly Met Val Thr Phe Asp Ser Val Ala Glu Ile Gln Asn
325 330 335

Pauli sequence.txt

His Leu Thr Arg Ile Thr Asp Asp Asn Val Tyr Gln Lys Ile Thr
340 345 350

Ala Lys Leu Pro Gln Val Ala Asn Gly Gly Thr Ser Ile Cys Arg
355 360 365

Gly Leu Lys Ala Gly Phe Gln Ala Ile Ile His Ser Asp Gln Ser
370 375 380

Thr Ser Gly Ser Glu Ile Ile Leu Leu Thr Asp Gly Glu Asp Asn
385 390 395

Glu Ile Asn Ser Cys Phe Glu Asp Val Lys Arg Ser Gly Ala Ile
400 405 410

Ile His Thr Ile Ala Leu Gly Pro Ser Ala Ala Lys Glu Leu Glu
415 420 425

Thr Lys Ser Asn Met Thr Gly Gly Tyr Arg Phe Phe Ala Asn Lys
430 435 440

Asp Ile Thr Gly Leu Thr Asn Ala Phe Ser Arg Ile Ser Ser Arg
445 450 455

Ser Gly Ser Ile Thr Gln Gln Ala Ile Gln Leu Glu Ser Lys Ala
460 465 470

Leu Lys Ile Thr Gly Arg Lys Arg Val Asn Gly Thr Val Pro Val
475 480 485

Asp Ser Thr Val Gly Asn Asp Thr Phe Phe Val Val Thr Trp Thr
490 495 500

Ile Gln Lys Pro Glu Ile Val Leu Gln Asp Pro Lys Gly Lys Lys
505 510 515

Tyr Lys Thr Ser Asp Phe Lys Glu Asp Lys Leu Asn Ile Arg Ser
520 525 530

Ala Arg Leu Gln Ile Pro Gly Ile Ala Glu Thr Gly Thr Trp Thr
535 540 545

Tyr Ser Leu Leu Asn Asn His Ala Ser Ser Gln Met Leu Thr Val
550 555 560

Thr Val Thr Thr Arg Ala Arg Ser Pro Thr Ile Pro Pro Val Ile
565 570 575

Pauli sequence.txt

Ala Thr Ala His Met Ser Gln His Thr Ala His Tyr Pro Ser Pro
580 585 590

Met Ile Val Tyr Ala Gln Val Ser Gln Gly Phe Leu Pro Val Leu
595 600 605

Gly Ile Ser Val Ile Ala Ile Ile Glu Thr Glu Asp Gly His Gln
610 615 620

Val Thr Leu Glu Leu Trp Asp Asn Gly Ala Gly Arg Asp Thr Val
625 630 635

Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe Thr Asp Tyr Tyr Gly
640 645 650

Asn Gly Arg Tyr Ser Leu Lys Val His Ala Gln Ala Arg Asn Asn
655 660 665

Thr Ala Arg Leu Asn Leu Arg Gln Pro Gln Asn Lys Val Leu Tyr
670 675 680

Val Pro Gly Tyr Val Glu Asn Gly Lys Ile Ile Leu Asn Pro Pro
685 690 695

Arg Pro Glu Val Lys Asp Asp Leu Ala Lys Ala Lys Ile Glu Asp
700 705 710

Phe Ser Arg Leu Thr Ser Gly Gly Ser Phe Thr Val Ser Gly Ala
715 720 725

Pro Pro Pro Gly Asn His Pro Ser Val Phe Pro Pro Ser Lys Ile
730 735 740

Thr Asp Leu Glu Ala Lys Phe Lys Glu Asp Tyr Ile Gln Leu Ser
745 750 755

Trp Thr Ala Pro Gly Asn Val Leu Asp Lys Gly Lys Ala Glu Ser
760 765 770 774

<210> 12
<211> 821
<212> PRT
<213> Unknown

<220>
<223> Variant of Lu-ECAM-1 from bovine endothelial cells

Pauli sequence.txt

<400> 12

Met Val Leu Cys Leu Asn Val Ile Leu Phe Leu Thr Leu His Leu
-20 -15 -10

Leu Pro Gly Met Lys Ser Ser Met Val Asn Leu Ile Asn Asn Gly
-5 1 5

Tyr Asp Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp
10 15 20

Glu Lys Leu Ile Glu Asn Ile Lys Glu Met Val Thr Glu Ala Ser
25 30 35

Thr Tyr Leu Phe His Ala Thr Lys Arg Arg Val Tyr Phe Arg Asn
40 45 50

Val Ser Ile Leu Ile Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr
55 60 65

Phe Ile Pro Lys Gln Glu Ser Tyr Asp Gln Ala Asp Val Ile Val
70 75 80

Ala Asn Pro Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu Gln
85 90 95

Tyr Gly Arg Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro
100 105 110

Asn Phe Leu Leu Thr Asn Asn Phe His Ile Tyr Gly Ser Arg Gly
115 120 125

Arg Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe
130 135 140

Asp Glu Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Lys Asn
145 150 155

Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr Gly Ile Asn
160 165 170

Val Val Phe Lys Lys Cys Pro Gly Gly Ser Cys Ile Thr Ser Leu
175 180 185

Cys Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr
190 195 200

Phe Leu Pro Lys Lys Ser Gln Thr Ala Lys Glu Ser Ile Met Phe
205 210 215

Pauli sequence.txt

Met Pro Ser Leu His Ser Val Thr Glu Phe Cys Thr Glu Lys Thr
220 225 230

His Asn Thr Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Gly
235 240 245

Lys Ser Thr Trp Asp Val Ile Met Asn Ser Val Asp Phe Gln Asn
250 255 260

Thr Ser Pro Met Thr Glu Met Asn Pro Pro Thr His Pro Thr Phe
265 270 275

Ser Leu Leu Lys Ser Lys Gln Arg Val Val Cys Leu Val Leu Asp
280 285 290

Lys Ser Gly Ser Met Ser Ala Glu Asp Arg Leu Phe Gln Met Asn
295 300 305

Gln Ala Ala Glu Leu Tyr Leu Ile Gln Val Ile Glu Lys Gly Ser
310 315 320

Leu Val Gly Met Val Thr Phe Asp Ser Val Ala Glu Ile Gln Asn
325 330 335

His Leu Thr Arg Ile Thr Asp Asp Asn Val Tyr Gln Lys Ile Thr
340 345 350

Ala Lys Leu Pro Gln Val Ala Asn Gly Gly Thr Ser Ile Cys Arg
355 360 365

Gly Leu Lys Ala Gly Phe Gln Ala Ile Ile His Ser Asp Gln Ser
370 375 380

Thr Ser Gly Ser Glu Ile Ile Leu Leu Thr Asp Gly Glu Asp Asn
385 390 395

Glu Ile Asn Ser Cys Phe Glu Asp Val Lys Arg Ser Gly Ala Ile
400 405 410

Ile His Thr Ile Ala Leu Gly Pro Ser Ala Ala Lys Glu Leu Glu
415 420 425

Thr Lys Ser Asn Met Thr Gly Gly Tyr Arg Phe Phe Ala Asn Lys
430 435 440

Asp Ile Thr Gly Leu Thr Asn Ala Phe Ser Arg Ile Ser Ser Arg
445 450 455

Pauli sequence.txt

Ser Gly Ser Ile Thr Gln Gln Ala Ile Gln Leu Glu Ser Lys Ala
460 465 470

Leu Lys Ile Thr Gly Arg Lys Arg Val Asn Gly Thr Val Pro Val
475 480 485

Asp Ser Thr Val Gly Asn Asp Thr Phe Phe Val Val Thr Trp Thr
490 495 500

Ile Gln Lys Pro Glu Ile Val Leu Gln Asp Pro Lys Gly Lys Lys
505 510 515

Tyr Lys Thr Ser Asp Phe Lys Glu Asp Lys Leu Asn Ile Arg Ser
520 525 530

Ala Arg Leu Gln Ile Pro Gly Ile Ala Glu Thr Gly Thr Trp Thr
535 540 545

Tyr Ser Leu Leu Asn Asn His Ala Ser Ser Gln Met Leu Thr Val
550 555 560

Thr Val Thr Thr Arg Ala Arg Ser Pro Thr Ile Pro Pro Val Ile
565 570 575

Ala Thr Ala His Met Ser Gln His Thr Ala His Tyr Pro Ser Pro
580 585 590

Met Ile Val Tyr Ala Gln Val Ser Gln Gly Phe Leu Pro Val Leu
595 600 605

Gly Ile Ser Val Ile Ala Ile Ile Glu Thr Glu Asp Gly His Gln
610 615 620

Val Thr Leu Glu Leu Trp Asp Asn Gly Ala Gly Arg Asp Thr Val
625 630 635

Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe Thr Asp Tyr Tyr Gly
640 645 650

Asn Gly Arg Tyr Ser Leu Lys Val His Ala Gln Ala Arg Asn Asn
655 660 665

Thr Ala Arg Leu Asn Leu Arg Gln Pro Gln Asn Lys Val Leu Tyr
670 675 680

Val Pro Gly Tyr Val Glu Asn Gly Lys Ile Ile Leu Asn Pro Pro
685 690 695

Pauli sequence.txt

Arg Pro Glu Val Lys Asp Asp Leu Ala Lys Ala Lys Ile Glu Asp
700 705 710

Phe Ser Arg Leu Thr Ser Gly Gly Ser Phe Thr Val Ser Gly Ala
715 720 725

Pro Pro Pro Gly Asn His Pro Ser Val Phe Pro Pro Ser Lys Ile
730 735 740

Thr Asp Leu Glu Ala Lys Phe Lys Glu Asp Tyr Ile Gln Leu Ser
745 750 755

Trp Thr Ala Pro Gly Asn Val Leu Asp Lys Gly Lys Ala Ala Ser
760 765 770

Gly Ser Phe Pro Met Ser Arg Phe Ser His Gln Val Ala Lys Val
775 780 785

Leu Glu Leu Gln Leu Gln His Gln Ser Phe Gln
790 795 800

<210> 13

<211> 342

<212> PRT

<213> Unknown

<220>

<223> Variant of Lu-ECAM-1 from bovine endothelial cells

<400> 13

Met Val Leu Cys Leu Asn Val Ile Leu Phe Leu Thr Leu His Leu
-20 -15 -10

Leu Pro Gly Met Lys Ser Ser Met Val Asn Leu Ile Asn Asn Gly
-5 1 5

Tyr Asp Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp
10 15 20

Glu Lys Leu Ile Glu Asn Ile Lys Glu Met Val Thr Glu Ala Ser
25 30 35

Thr Tyr Leu Phe His Ala Thr Lys Arg Arg Val Tyr Phe Arg Asn
40 45 50

Val Ser Ile Leu Ile Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr

Pauli sequence.txt

55	60	65
Phe Ile Pro Lys Gln Glu Ser Tyr Asp Gln Ala Asp Val Ile Val		
70	75	80
Ala Asn Pro Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu Gln		
85	90	95
Tyr Gly Arg Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro		
100	105	110
Asn Phe Leu Leu Thr Asn Asn Phe His Ile Tyr Gly Ser Arg Gly		
115	120	125
Arg Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe		
130	135	140
Asp Glu Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Lys Asn		
145	150	155
Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr Gly Ile Asn		
160	165	170
Val Val Phe Lys Lys Cys Pro Gly Gly Ser Cys Ile Thr Ser Leu		
175	180	185
Cys Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr		
190	195	200
Phe Leu Pro Lys Lys Ser Gln Thr Ala Lys Glu Ser Ile Met Phe		
205	210	215
Met Pro Ser Leu His Ser Val Thr Glu Phe Cys Thr Glu Lys Thr		
220	225	230
His Asn Thr Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Gly		
235	240	245
Lys Ser Thr Trp Asp Val Ile Met Asn Ser Val Asp Phe Gln Asn		
250	255	260
Thr Ser Pro Met Thr Glu Met Asn Pro Pro Thr His Pro Thr Phe		
265	270	275
Ser Leu Leu Lys Ser Lys Gln Arg Val Val Cys Leu Val Leu Asp		
280	285	290
Lys Ser Gly Ser Met Ser Ala Glu Asp Ile Tyr Leu Leu Ala Leu		

Pauli sequence.txt

295	300	305
Leu Ile Lys Ile Phe Lys Leu Ile Gly Asn Thr Ile		
310	315	320 321

<210> 14
<211> 335
<212> DNA
<213> Artificial sequence

<220>
<223> Oligonucleotide probe

<400> 14
caacagctac attataagaa taagtaagag tttcatggat cgtcaagaag 50
attttgacaa tgcgacttta gtgaataactt ctaatctaatt acctaaggag 100
gccggatcaa aagaaaattt tgaatttaag ccagaacatt ttagagtaga 150
aatggcacc aaattctata tttcagtcca agccatcaac gaagccaatc 200
tcatctcaga ggtttctcac attgtacaag caatcaaatt tattcctcta 250
ccagaagaca gtgtccatga tctgggtacc aagatttctg aaatcactct 300
ggcaatttta ggattaccaa tgattttctc tgtat 335

<210> 15
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic peptide

<400> 15
Glu Asp Glu Lys Leu Ile Glu Asn Ile Lys Glu Met Val Thr Glu
5 10 15

Ala Ser
17

<210> 16
<211> 17
<212> PRT
<213> Artificial sequence

Pauli sequence.txt

<220>

<223> synthetic peptide

<400> 16

Gln Asp Pro Lys Gly Lys Lys Tyr Lys Thr Ser Asp Phe Lys Glu
1 5 10 15

Asp Lys

17

<210> 17

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Amplification primer

<400> 17

atgttcaact catattactg gtat 24

<210> 18

<211> 20

<212> DNA

<213> Artificial sequence

<220>

<223> Amplification primer

<400> 18

tgttaggttg gagcttctgt 20

<210> 19

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Amplification primer

<400> 19

cacagacagg gctgtatgaa 20

<210> 20

<211> 23

<212> DNA

<213> Artificial Sequence

Pauli sequence.txt

<220>
<223> Amplification Primer

<400> 20
ggagatgtat tctgaaagtc aac 23

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Amplification primer

<400> 21
atgttcaact catattactg gtac 24

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Amplification primer

<400> 22
tgttaggtttg gagcttccac 20

<210> 23
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Amplification primer

<400> 23
cacagacagg gctgtatgag 20

<210> 24
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Amplification primer

<400> 24

Pauli sequence.txt

ggagatgtat tttgaaagtc agt 23

<210> 25

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Amplification primer

<400> 25

actgaattca gcagactaac ctctggaggg tc 32

<210> 26

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Amplification primer

<400> 26

tctactagta gcttagcta ctgaagaaca ag 32

<210> 27

<211> 3007

<212> DNA

<213> Homo sapiens

<400> 27

taacccgcata ttccaaaga gaggaatcac agggagatgt acagca atg ggg 52

cca ttt aag agt tct gtg ttc atc ttg att ctt cac ctt cta gaa 97

ggg gcc ctg agt aat tca ctc att cag ctg aac aac aat ggc tat 142

gaa ggc att gtc gtt gca atc gac ccc aat gtg cca gaa gat gaa 187

aca ctc att caa caa ata aag gac atg gtg acc cag gca tct ctg 232

tat ctg ttt gaa gct aca gga aag cga ttt tat ttc aaa aat gtt 277

gcc att ttg att cct gaa aca tgg aag aca aag gct gac tat gtg 322

aga cca aaa ctt gag acc tac aaa aat gct gat gtt ctg gtt gct 367

gag tct act cct cca ggt aat gat gaa ccc tac act gag cag atg 412

Pauli sequence.txt

ggc aac tgt gga gag aag ggt gaa agg atc cac ctc act cct gat	457
ttc att gca gga aaa aag tta gct gaa tat gga cca caa ggt aag	502
gca ttt gtc cat gag tgg gct cat cta cga tgg gga gta ttt gac	547
gag tac aat aat gat gag aaa ttc tac tta tcc aat gga aga ata	592
caa gca gta aga tgt tca gca ggt att act ggt aca aat gta gta	637
aag aag tgt cag gga ggc agc tgt tac acc aaa aga tgc aca ttc	682
aat aaa gtt aca gga ctc tat gaa aaa gga tgt gag ttt gtt ctc	727
caa tcc cgc cag acg gag aag gct tct ata atg ttt gca caa cat	772
gtt gat tct ata gtt gaa ttc tgt aca gaa caa aac cac aac aaa	817
gaa gct cca aac aag caa aat caa aaa tgc aat ctc cga agc aca	862
tgg gaa gtg atc cgt gat tct gag gac ttt aag aaa acc act cct	907
atg aca aca cag cca cca aat ccc acc ttc tca ttg ctg cag att	952
gga caa aga att gtg tgt tta gtc ctt gac aaa tct gga agc atg	997
gcg act ggt aac cgc ctc aat cga ctg aat caa gca ggc cag ctt	1042
ttc ctg ctg cag aca gtt gag ctg ggg tcc tgg gtt ggg atg gtg	1087
aca ttt gac agt gct gcc cat gta caa agt gaa ctc ata cag ata	1132
aac agt ggc agt gac agg gac aca ctc gcc aaa aga tta cct gca	1177
gca gct tca gga ggg acg tcc atc tgc agc ggg ctt cga tcg gca	1222
ttt act gtg att agg aag aaa tat cca act gat gga tct gaa att	1267
gtg ctg ctg acg gat ggg gaa gac aac act ata agt ggg tgc ttt	1312
aac gag gtc aaa caa agt ggt gcc atc atc cac aca gtc gct ttg	1357
ggg ccc tct gca gct caa gaa cta gag gag ctg tcc aaa atg aca	1402
gga ggt tta cag aca tat gct tca gat caa gtt cag aac aat ggc	1447
ctc att gat gct ttt ggg gcc ctt tca tca gga aat gga gct gtc	1492

Pauli sequence.txt

tct cag cgc tcc atc cag ctt gag agt aag gga tta acc ctc cag	1537
aac agc cag tgg atg aat ggc aca gtg atc gtg gac agc acc gtg	1582
gga aag gac act ttg ttt ctt atc acc tgg aca acg cag cct ccc	1627
caa atc ctt ctc tgg gat ccc agt gga cag aag caa ggt ggc ttt	1672
gta gtg gac aaa aac acc aaa atg gcc tac ctc caa atc cca ggc	1717
att gct aag gtt ggc act tgg aaa tac agt ctg caa gca agc tca	1762
caa acc ttg acc ctg act gtc acg tcc cgt gcg tcc aat gct acc	1807
ctg cct cca att aca gtg act tcc aaa acg aac aag gac acc agc	1852
aaa ttc ccc agc cct ctg gta gtt tat gca aat att cgc caa gga	1897
gcc tcc cca att ctc agg gcc agt gtc aca gcc ctg att gaa tca	1942
gtg aat gga aaa aca gtt acc ttg gaa cta ctg gat aat gga gca	1987
ggt gct gat gct act aag gat gac ggt gtc tac tca agg tat ttc	2032
aca act tat gac acg aat ggt aga tac agt gta aaa gtg cgg gct	2077
ctg gga gga gtt aac gca gcc aga cgg aga gtg ata ccc cag cag	2122
agt gga gca ctg tac ata cct ggc tgg att gag aat gat gaa ata	2167
caa tgg aat cca cca aga cct gaa att aat aag gat gat gtt caa	2212
cac aag caa gtg tgt ttc agc aga aca tcc tcg gga ggc tca ttt	2257
gtg gct tct gat gtc cca aat gct ccc ata cct gat ctc ttc cca	2302
cct ggc caa atc acc gac ctg aag gcg gaa att cac ggg ggc agt	2347
ctc att aat ctg act tgg aca gct cct ggg gat gat tat gac cat	2392
gga aca gct cac aag tat atc att cga ata agt aca agt att ctt	2437
gat ctc aga gac aag ttc aat gaa tct ctt caa gtg aat act act	2482
gct ctc atc cca aag gaa gcc aac tot gag gaa gtc ttt ttg ttt	2527
aaa cca gaa aac att act ttt gaa aat ggc aca gat ctt ttc att	2572

Pauli sequence.txt

gct att cag gct gtt gat aag gtc gat ctg aaa tca gaa ata tcc 2617
aac att gca cga gta tct ttg ttt att cct cca cag act ccg cca 2662
gag aca cct agt cct gat gaa acg tct gct cct tgt cct aat att 2707
cat atc aac agc acc att cct ggc att cac att tta aaa att atg 2752
tgg aag tgg ata gga gaa ctg cag ctg tca ata gcc tagggctgaa 2798
tttttgcag ataaataaaa taaatcattc atccttttt ttgattataa 2848
aatttttaa aatgtatttt agaattcctg tagggggcga tataactaaat 2898
gtatatagtt cattataact aaatgtattc ctgttaggggg cgatataacta 2948
aatgtatttt agaattcctg tagggggcga taaaataaaa tgctaaacaa 2998
ctggggaaa 3007

<210> 28

<211> 914

<212> PRT

<213> Homo sapiens

<400> 28

Met Gly Pro Phe Lys Ser Ser Val Phe Ile Leu Ile Leu His Leu
1 5 10 15

Leu Glu Gly Ala Leu Ser Asn Ser Leu Ile Gln Leu Asn Asn Asn
20 25 30

Gly Tyr Glu Gly Ile Val Val Ala Ile Asp Pro Asn Val Pro Glu
35 40 45

Asp Glu Thr Leu Ile Gln Gln Ile Lys Asp Met Val Thr Gln Ala
50 55 60

Ser Leu Tyr Leu Phe Glu Ala Thr Gly Lys Arg Phe Tyr Phe Lys
65 70 75

Asn Val Ala Ile Leu Ile Pro Glu Thr Trp Lys Thr Lys Ala Asp
80 85 90

Tyr Val Arg Pro Lys Leu Glu Thr Tyr Lys Asn Ala Asp Val Leu
95 100 105

Val Ala Glu Ser Thr Pro Pro Gly Asn Asp Glu Pro Tyr Thr Glu

Pauli sequence.txt

110	115	120
Gln Met Gly Asn Cys Gly Glu Lys Gly Glu Arg Ile His Leu Thr		
125	130	135
Pro Asp Phe Ile Ala Gly Lys Lys Leu Ala Glu Tyr Gly Pro Gln		
140	145	150
Gly Lys Ala Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val		
155	160	165
Phe Asp Glu Tyr Asn Asn Asp Glu Lys Phe Tyr Leu Ser Asn Gly		
170	175	180
Arg Ile Gln Ala Val Arg Cys Ser Ala Gly Ile Thr Gly Thr Asn		
185	190	195
Val Val Lys Lys Cys Gln Gly Ser Cys Tyr Thr Lys Arg Cys		
200	205	210
Thr Phe Asn Lys Val Thr Gly Leu Tyr Glu Lys Gly Cys Glu Phe		
215	220	225
Val Leu Gln Ser Arg Gln Thr Glu Lys Ala Ser Ile Met Phe Ala		
230	235	240
Gln His Val Asp Ser Ile Val Glu Phe Cys Thr Glu Gln Asn His		
245	250	255
Asn Lys Glu Ala Pro Asn Lys Gln Asn Gln Lys Cys Asn Leu Arg		
260	265	270
Ser Thr Trp Glu Val Ile Arg Asp Ser Glu Asp Phe Lys Lys Thr		
275	280	285
Thr Pro Met Thr Thr Gln Pro Pro Asn Pro Thr Phe Ser Leu Leu		
290	295	300
Gln Ile Gly Gln Arg Ile Val Cys Leu Val Leu Asp Lys Ser Gly		
305	310	315
Ser Met Ala Thr Gly Asn Arg Leu Asn Arg Leu Asn Gln Ala Gly		
320	325	330
Gln Leu Phe Leu Leu Gln Thr Val Glu Leu Gly Ser Trp Val Gly		
335	340	345
Met Val Thr Phe Asp Ser Ala Ala His Val Gln Ser Glu Leu Ile		

Pauli sequence.txt

350	355	360
Gln Ile Asn Ser Gly Ser Asp Arg Asp Thr Leu Ala Lys Arg Leu		
365	370	375
Pro Ala Ala Ala Ser Gly Gly Thr Ser Ile Cys Ser Gly Leu Arg		
380	385	390
Ser Ala Phe Thr Val Ile Arg Lys Lys Tyr Pro Thr Asp Gly Ser		
395	400	405
Glu Ile Val Leu Leu Thr Asp Gly Glu Asp Asn Thr Ile Ser Gly		
410	415	420
Cys Phe Asn Glu Val Lys Gln Ser Gly Ala Ile Ile His Thr Val		
425	430	435
Ala Leu Gly Pro Ser Ala Ala Gln Glu Leu Glu Glu Leu Ser Lys		
440	445	450
Met Thr Gly Gly Leu Gln Thr Tyr Ala Ser Asp Gln Val Gln Asn		
455	460	465
Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Ser Ser Gly Asn Gly		
470	475	480
Ala Val Ser Gln Arg Ser Ile Gln Leu Glu Ser Lys Gly Leu Thr		
485	490	495
Leu Gln Asn Ser Gln Trp Met Asn Gly Thr Val Ile Val Asp Ser		
500	505	510
Thr Val Gly Lys Asp Thr Leu Phe Leu Ile Thr Trp Thr Thr Gln		
515	520	525
Pro Pro Gln Ile Leu Leu Trp Asp Pro Ser Gly Gln Lys Gln Gly		
530	535	540
Gly Phe Val Val Asp Lys Asn Thr Lys Met Ala Tyr Leu Gln Ile		
545	550	555
Pro Gly Ile Ala Lys Val Gly Thr Trp Lys Tyr Ser Leu Gln Ala		
560	565	570
Ser Ser Gln Thr Leu Thr Leu Thr Val Thr Ser Arg Ala Ser Asn		
575	580	585
Ala Thr Leu Pro Pro Ile Thr Val Thr Ser Lys Thr Asn Lys Asp		

Pauli sequence.txt

590	595	600
-----	-----	-----

Thr Ser Lys Phe Pro Ser Pro Leu Val Val Tyr Ala Asn Ile Arg		
605	610	615

Gln Gly Ala Ser Pro Ile Leu Arg Ala Ser Val Thr Ala Leu Ile		
620	625	630

Glu Ser Val Asn Gly Lys Thr Val Thr Leu Gln Leu Leu Asp Asn		
635	640	645

Gly Ala Gly Ala Asp Ala Thr Lys Asp Asp Gly Val Tyr Ser Arg		
650	655	660

Tyr Phe Thr Thr Tyr Asp Thr Asn Gly Arg Tyr Ser Val Lys Val		
665	670	675

Arg Ala Leu Gly Gly Val Asn Ala Ala Arg Arg Arg Val Ile Pro		
680	685	690

Gln Gln Ser Gly Ala Leu Tyr Ile Pro Gly Trp Ile Glu Asn Asp		
695	700	705

Glu Ile Gln Trp Asn Pro Pro Arg Pro Glu Ile Asn Lys Asp Asp		
710	715	720

Val Gln His Lys Gln Val Cys Phe Ser Arg Thr Ser Ser Gly Gly		
725	730	735

Ser Phe Val Ala Ser Asp Val Pro Asn Ala Pro Ile Pro Asp Leu		
740	745	750

Phe Pro Pro Gly Gln Ile Thr Asp Leu Lys Ala Glu Ile His Gly		
755	760	765

Gly Ser Leu Ile Asn Leu Thr Trp Thr Ala Pro Gly Asp Asp Tyr		
770	775	780

Asp His Gly Thr Ala His Lys Tyr Ile Ile Arg Ile Ser Thr Ser		
785	790	795

Ile Leu Asp Leu Arg Asp Lys Phe Asn Glu Ser Leu Gln Val Asn		
800	805	810

Thr Thr Ala Leu Ile Pro Lys Glu Ala Asn Ser Glu Glu Val Phe		
815	820	825

Leu Phe Lys Pro Glu Asn Ile Thr Phe Glu Asn Gly Thr Asp Leu		
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Pauli sequence.txt

830	835	840
-----	-----	-----

Phe Ile Ala Ile Gln Ala Val Asp Lys Val Asp Leu Lys Ser Glu		
845	850	855

Ile Ser Asn Ile Ala Arg Val Ser Leu Phe Ile Pro Pro Gln Thr		
860	865	870

Pro Pro Glu Thr Pro Ser Pro Asp Glu Thr Ser Ala Pro Cys Pro		
875	880	885

Asn Ile His Ile Asn Ser Thr Ile Pro Gly Ile His Ile Leu Lys		
890	895	900

Ile Met Trp Lys Trp Ile Gly Glu Leu Gln Leu Ser Ile Ala		
905	910	914

<210> 29

<211> 3418

<212> DNA

<213> Homo sapiens

<400> 29

tttgttaac atgcaaga atg gtg ttc agt ctg aag gtg att ctc ttc	48
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cta tcc ttg ctt ctc tcg cct gta ttg aaa agc tca ctg gta act	93
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ttg aat aac aat gga tat gat ggc att gtg att gca att aat ccc	138
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agt gta cca gaa gat gaa aaa ctc att caa aac ata aag gaa atg	183
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gta act gaa gca tct act cac ctg ttt cat gcc acc aaa caa aga	228
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gct tat ttc agg aat gta agc att tta att cca atg acc tac aaa	273
---	-----

tca aaa tct gag tac tta atc cca aaa caa gaa aca tat gac cag	318
---	-----

gca gat gtc ata gtt gat ctt tac ctg aaa tac gga gat gat	363
---	-----

ccc tat aca ctt caa tat gga caa tgt gga gat aaa gga caa tat	408
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ata cat ttt act cca aac ttc ttg ttg act aat aac ttg gct acc	453
---	-----

tat ggg cct cga ggt aaa gta ttt gtc cat ggg tgg gcc cat ctc	498
---	-----

cgg tgg gga gta ttt gat gag tat aat gtg gac cag cca ttc tat	543
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Pauli sequence.txt

att tcc aga aga aac act act gaa gca aca aga tgt tcc act cgt	588
att act gtt tac atg gtt ttg aac gaa tgc aag ggg gcc agc tgt	633
ata gca cga cca ttc aga cgt gac tca cag aca ggg ctg tat gaa	678
gca aaa tgt aca ttt atc cca aag aga tcc cag act gcc aag gaa	723
tcc att gtg ttt atg caa aat ctt gat tct gtg act gaa ttt tgt	768
act gaa aaa aca cac aat aaa gaa gct cca aac cta tat aac aaa	813
atg tgc aat cac aga agc aca tgg gat gta atc atg agc tct gaa	858
gat ttt cag cat tta tct ccc atg aca gaa ata aat tta cct cgt	903
cct aca ttt tca ttg ctc aag tcc aaa cag cgt gta gtc tgt ttg	948
gta ctt gat aaa tct gga agc atg aat gca gaa gac cgt ctc ttt	993
cga atg aat caa gca gca gaa ttg tac ttg att caa att att gaa	1038
aag gga tcc ttg gtt ggg ttg gtc aca ttt gac agt ttt gct aaa	1083
atc caa agt aag ctc ata aaa ata att gat gat aac act tac caa	1128
aag atc act gca aac ctg cct caa gaa gct gat ggt ggc act tca	1173
att tgc agg gga ctc aaa gca gga ttt cag gca att ccc cag agt	1218
aat cag agt act ttc ggt tct gaa atc ata tta cta aca gat ggg	1263
gaa gat tat caa ata agc tta tgc ttt gga gag gta aaa caa agt	1308
ggc aca gtc atc cac acc att gct ctg ggg ccg tct gct gac gaa	1353
gaa ctg gag acc ctg tca aat atg aca gga tta cat aag gga cac	1398
tgt tat act gaa agt tca tat agt gct ggg aag ttc atc ttt tgt	1443
gga cat cgt ttt tat gcc cat aaa aac ata aat ggc ctt att gat	1488
gct ttc agc aga att tca tct aga agt ggc agc atc tct cag cag	1533
gct ctt cag ttg gaa agt aaa act ttg aat atc cca gcg aag aaa	1578
tgg ata aat ggt aca gtg cct gtg gat agt aca gtt aga aat gat	1623

Pauli sequence.txt

act tcc ttt gtt gtc aca tgg acg ata caa aag cca gca ata att	1668
ctt caa gat cca aaa gga aaa aaa tat act acc tca gat ttt caa	1713
gaa ggt gaa cta aat att cggt tct gcc cgt ctt cga ata cca ggt	1758
att gca gag aca ggc act tgg act tac agc gtt cga aac aat cat	1803
acc aaa tct caa ttg cta act gtg aca atg acc act cga gca aga	1848
agc cct acc aca ctc cca gta att gca act gct cac atg agt caa	1893
aat aca gct cat tac cct agc cca gtg att gtt tat gca tgt gtc	1938
agt caa ggg ttt ctt cct gtt ctg gga atc aat gta aca gcc att	1983
ata gaa aat gaa gag gga cat caa gta aca ttg gag ctc tgc gac	2028
aat ggc gca ggt gct gat tct gtc aag aat gat ggc atc tac tca	2073
agg tat ttt aca gat tac cat gga aat ggt aga tac agt tta aaa	2118
gtg ctt acc cag gca aga aaa aac aca gct agg cta agt caa caa	2163
cag aat aaa gct ctg tat gta ccg cgc tat gct gaa aat gga aaa	2208
att ata ctg aac cca tcc aaa cct gaa gtc aca gat gat gtg gaa	2253
gga gct caa aca gac gac ttc agc aga ctc acc tct gga ggg tcg	2298
ttt act gta tca gga gtg cct cct aat ggt aat cat tct cag gtg	2343
ttc tca cct ggt aaa att gta gac ctc gag gct aag ttt caa gga	2388
gat cat att caa ctt tca tgg act gcc cct ggc aag gtc ctc gat	2433
aaa gga aga gct gag agc tac att ata aga ata agt aaa cat ttc	2478
ctg gac ctc caa gaa gat ttt gat aaa gct gct tta ata aat act	2523
tct ggt ctg ata cct aag gag cct ggt tca gta gaa agt ttt gaa	2568
ttt aaa cca gaa cct tct aaa ata gag aat ggt acg aca ttc tat	2613
att gca att caa gcc atc cat gaa gcc aat gtc acc tca gag gtt	2658
tca aac att gca caa gca act aac ttt att cct cca cag gaa ccc	2703

Pauli sequence.txt

agc att cct gat ctg ggt acc aat att tct gca atc agt ttg gca	2748
att ttt gga tta gct gta att tta tct ata ttt tat act aga aat	2793
tat att aga act caa att caa tgt tat aca tac ttg gta aac att	2838
tat tta aaa ttt aat tta cta tac tta ttg tct att ata aag ctc	2883
att ata ata tat aaa gtg aag tac aaa agt tgt aag ttt cct aat	2928
tac ttg att aat tat tac tat ttg agt tat tat atg tta atc aaa	2973
atg agt ata tca ttt cct gtc tgg aat aat cca ctc att aat ttt	3018
taatatgaaa agatataatat ttgtacttgt aagcattta agaaacattt	3068
ttaaaagtgtg ctacaaatttccatttggtgta ctaacatcaa aatgttatcca	3118
agccatttaa aaaatattta tatatacata gtagcaaata gttttataga	3168
tttatttgta tcgcattttt tattacaaat gaatattca tgtttatata	3218
agctgtaatc aaaaaggact agtagtagta gtaaggaagt caaatttgg	3268
tttttatcat tgattataag tggtatattt gtttttgtc attgattaaa	3318
agtgatttttta gccctaggcc cgaaatgact agcaaataatc attttctgta	3368
tgaattgtgg aacatcacaa taaaattatt tctgtgctga tgctaaaaaa	3418

<210> 30
<211> 1000
<212> PRT
<213> Homo sapiens

<400> 30
Met Val Phe Ser Leu Lys Val Ile Leu Phe Leu Ser Leu Leu Leu
1 5 10 15

Ser Pro Val Leu Lys Ser Ser Leu Val Thr Leu Asn Asn Asn Gly
20 25 30

Tyr Asp Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp
35 40 45

Glu Lys Leu Ile Gln Asn Ile Lys Glu Met Val Thr Gln Ala Ser
50 55 60

Pauli sequence.txt

Thr His Leu Phe His Ala Thr Lys Gln Arg Ala Tyr Phe Arg Asn
65 70 75

Val Ser Ile Leu Ile Pro Met Thr Tyr Lys Ser Lys Ser Glu Tyr
80 85 90

Leu Ile Pro Lys Gln Glu Thr Tyr Asp Gln Ala Asp Val Ile Val
95 100 105

Ala Asp Leu Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu Gln
110 115 120

Tyr Gly Gln Cys Gly Asp Lys Gly Gln Tyr Ile His Phe Thr Pro
125 130 135

Asn Phe Leu Leu Thr Asn Asn Leu Ala Thr Tyr Gly Pro Arg Gly
140 145 150

Lys Val Phe Val His Gly Trp Ala His Leu Arg Trp Gly Val Phe
155 160 165

Asp Glu Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Arg Asn
170 175 180

Thr Thr Glu Ala Thr Arg Cys Ser Thr Arg Ile Thr Val Tyr Met
185 190 195

Val Leu Asn Glu Cys Lys Gly Ala Ser Cys Ile Ala Arg Pro Phe
200 205 210

Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr Phe
215 220 225

Ile Pro Lys Arg Ser Gln Thr Ala Lys Glu Ser Ile Val Phe Met
230 235 240

Gln Asn Leu Asp Ser Val Thr Glu Phe Cys Thr Glu Lys Thr His
245 250 255

Asn Lys Glu Ala Pro Asn Leu Tyr Asn Lys Met Cys Asn His Arg
260 265 270

Ser Thr Trp Asp Val Ile Met Ser Ser Glu Asp Phe Gln His Leu
275 280 285

Ser Pro Met Thr Glu Ile Asn Leu Pro Arg Pro Thr Phe Ser Leu
290 295 300

Pauli sequence.txt

Leu Lys Ser Lys Gln Arg Val Val Cys Leu Val Leu Asp Lys Ser
305 310 315

Gly Ser Met Asn Ala Glu Asp Arg Leu Phe Arg Met Asn Gln Ala
320 325 330

Ala Glu Leu Tyr Leu Ile Gln Ile Glu Lys Gly Ser Leu Val
335 340 345

Gly Leu Val Thr Phe Asp Ser Phe Ala Lys Ile Gln Ser Lys Leu
350 355 360

Ile Lys Ile Ile Asp Asp Asn Thr Tyr Gln Lys Ile Thr Ala Asn
365 370 375

Leu Pro Gln Glu Ala Asp Gly Gly Thr Ser Ile Cys Arg Gly Leu
380 385 390

Lys Ala Gly Phe Gln Ala Ile Pro Gln Ser Asn Gln Ser Thr Phe
395 400 405

Gly Ser Glu Ile Ile Leu Leu Thr Asp Gly Glu Asp Tyr Gln Ile
410 415 420

Ser Leu Cys Phe Gly Glu Val Lys Gln Ser Gly Thr Val Ile His
425 430 435

Thr Ile Ala Leu Gly Pro Ser Ala Asp Glu Glu Leu Glu Thr Leu
440 445 450

Ser Asn Met Thr Gly Leu His Lys Gly His Cys Tyr Thr Glu Ser
455 460 465

Ser Tyr Ser Ala Gly Lys Phe Ile Phe Cys Gly His Arg Phe Tyr
470 475 480

Ala His Lys Asn Ile Asn Gly Leu Ile Asp Ala Phe Ser Arg Ile
485 490 495

Ser Ser Arg Ser Gly Ser Ile Ser Gln Gln Ala Leu Gln Leu Glu
500 505 510

Ser Lys Thr Leu Asn Ile Pro Ala Lys Lys Trp Ile Asn Gly Thr
515 520 525

Val Pro Val Asp Ser Thr Val Arg Asn Asp Thr Ser Phe Val Val
530 535 540

Pauli sequence.txt

Thr Trp Thr Ile Gln Lys Pro Ala Ile Ile Leu Gln Asp Pro Lys
545 550 555

Gly Lys Lys Tyr Thr Thr Ser Asp Phe Gln Glu Gly Glu Leu Asn
560 565 570

Ile Arg Ser Ala Arg Leu Arg Ile Pro Gly Ile Ala Glu Thr Gly
575 580 585

Ile Trp Thr Tyr Ser Val Arg Asn Asn His Thr Lys Ser Gln Leu
590 595 600

Leu Thr Val Thr Met Thr Arg Ala Arg Ser Pro Thr Thr Leu
605 610 615

Pro Val Ile Ala Thr Ala His Ser Met Gln Asn Thr Ala His Tyr
620 625 630

Pro Ser Pro Val Ile Val Tyr Ala Cys Val Ser Gln Gly Phe Leu
635 640 645

Pro Val Leu Gly Ile Asn Val Thr Ala Ile Ile Glu Asn Glu Glu
650 655 660

Gly His Gln Val Thr Leu Glu Leu Cys Asp Asn Gly Ala Gly Ala
665 670 675

Asp Ser Val Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe Thr Asp
680 685 690

Tyr His Gly Asn Gly Arg Tyr Ser Leu Lys Val Leu Thr Gln Ala
695 700 705

Arg Lys Asn Thr Ala Arg Leu Ser Gln Gln Asn Lys Ala Leu
710 715 720

Tyr Val Pro Arg Tyr Ala Glu Asn Gly Lys Ile Ile Leu Asn Pro
725 730 735

Ser Lys Pro Glu Val Thr Asp Asp Val Glu Gly Ala Gln Thr Asp
740 745 750

Asp Phe Ser Arg Leu Thr Ser Gly Gly Ser Phe Thr Val Ser Gly
755 760 765

Val Pro Pro Asn Gly Asn His Ser Gln Val Phe Ser Pro Gly Lys
770 775 780

Pauli sequence.txt

Ile	Val	Asp	Leu	Glu	Ala	Lys	Phe	Gln	Gly	Asp	His	Ile	Gln	Leu
				785				790						795
Ser	Trp	Thr	Ala	Pro	Gly	Lys	Val	Leu	Asp	Lys	Gly	Arg	Ala	Glu
				800				805						810
Ser	Tyr	Ile	Ile	Arg	Ile	Ser	Lys	His	Phe	Leu	Asp	Leu	Gln	Glu
				815				820						825
Asp	Phe	Asp	Lys	Ala	Ala	Leu	Ile	Asn	Thr	Ser	Gly	Leu	Ile	Pro
				830				835						840
Lys	Glu	Pro	Gly	Ser	Val	Glu	Ser	Phe	Glu	Phe	Lys	Pro	Glu	Pro
				845				850						855
Ser	Lys	Ile	Glu	Asn	Gly	Thr	Thr	Phe	Tyr	Ile	Ala	Ile	Gln	Ala
				860				865						870
Ile	His	Glu	Ala	Asn	Val	Thr	Ser	Glu	Val	Ser	Asn	Ile	Ala	Gln
				875				880						885
Ala	Thr	Asn	Phe	Ile	Pro	Pro	Gln	Glu	Pro	Ser	Ile	Pro	Asp	Leu
				890				895						900
Gly	Thr	Asn	Ile	Ser	Ala	Ile	Ser	Leu	Ala	Ile	Phe	Gly	Leu	Ala
				905				910						915
Val	Ile	Leu	Ser	Ile	Phe	Tyr	Thr	Arg	Asn	Tyr	Ile	Arg	Thr	Gln
				920				925						930
Ile	Gln	Cys	Tyr	Thr	Tyr	Leu	Val	Asn	Ile	Tyr	Leu	Lys	Phe	Asn
				935				940						945
Leu	Leu	Tyr	Leu	Leu	Ser	Ile	Ile	Lys	Leu	Ile	Ile	Ile	Tyr	Lys
				950				955						960
Val	Lys	Tyr	Lys	Ser	Cys	Lys	Phe	Pro	Asn	Tyr	Leu	Ile	Asn	Tyr
				965				970						975
Tyr	Tyr	Leu	Ser	Tyr	Tyr	Met	Leu	Ile	Lys	Met	Ser	Ile	Ser	Phe
				980				985						990
Pro	Val	Trp	Asn	Asn	Pro	Leu	Ile	Asn	Phe					
				995				1000						

<210> 31
<211> 2970

Pauli sequence.txt

<212> DNA

<213> Homo sapiens

<400> 31

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acctgacaca atgtatgcag caggctcagt gtgagtgaac tggaggcttc	100
tctacaac atg acc caa agg agc att gca ggt cct att tgc aac	144
ctg aag ttt gtg act ctc ctg gtt gcc tta agt tca gaa ctc cca	189
ttc ctg gga gct gga gta cag ctt caa gac aat ggg tat aat gga	234
ttg ctc att gca att aat cct cag gta cct gag aat cag aac ctc	279
atc tca aac att aag gaa atg ata act gaa gct tca ttt tac cta	324
ttt aat gct acc aag aga gta ttt ttc aga aat ata aag att	369
tta ata cct gcc aca tgg aaa gct aat aat aac agc aaa ata aaa	414
caa gaa tca tat gaa aag gca aat gtc ata gtg act gac tgg tat	459
ggg gca cat gga gat gat cca tac acc cta caa tac aga ggg tgt	504
gga aaa gag gga aaa tac att cat ttc aca cct aat ttc cta ctg	549
aat gat aac tta aca gct ggc tac gga tca cga ggc cga gtg ttt	594
gtc cat gaa tgg gcc cac ctc cgt tgg ggt gtg ttc gat gag tat	639
aac aat gac aaa cct ttc tac ata aat ggg caa aat caa att aaa	684
gtg aca agg tgt tca tct gac atc aca ggc att ttt gtg tgt gaa	729
aaa ggt cct tgc ccc caa gaa aac tgt att att agt aag ctt ttt	774
aaa gaa gga tgc acc ttt atc tac aat agc acc caa aat gca act	819
gca tca ata atg ttc atg caa agt tta tct tct gtg gtt gaa ttt	864
tgt aat gca agt acc cac aac caa gaa gca cca aac cta cag aac	909
cag atg tgc agc ctc aga agt gca tgg gat gta atc aca gac tct	954
gct gac ttt cac cac agc ttt ccc atg aat ggg act gag ctt cca	999
cct cct ccc aca ttc tcg ctt gta cag gct ggt gac aaa gtg gtc	1044

Pauli sequence.txt

tgt tta gtg ctg gat gtg tcc agc aag atg gca gag gct gac aga	1089
ctc ctt caa cta caa caa gcc gca gaa ttt tat ttg atg cag att	1134
gtt gaa att cat acc ttc gtg ggc att gcc agt ttc gac agc aaa	1179
gga gag atc aga gcc cag cta cac caa att aac agc aat gat gat	1224
cga aag ttg ctg gtt tca tat ctg ccc acc act gta tca gct aaa	1269
aca gac atc agc att tgt tca ggg ctt aag aaa gga ttt gag gtg	1314
gtt gaa aaa ctg aat gga aaa gct tat ggc tct gtg atg ata tta	1359
gtg acc agc gga gat gat aag ctt ctt ggc aat tgc tta ccc act	1404
gtg ctc agc agt ggt tca aca att cac tcc att gcc ctg ggt tca	1449
tct gca gcc cca aat ctg gag gaa tta tca cgt ctt aca gga ggt	1494
tta aag ttc ttt gtt cca gat ata tca aac tcc aat agc atg att	1539
gat gct ttc agt aga att tcc tct gga act gga gac att ttc cag	1584
caa cat att cag ctt gaa agt aca ggt gaa aat gtc aaa cct cac	1629
cat caa ttg aaa aac aca gtg act gtg gat aat act gtg ggc aac	1674
gac act atg ttt cta gtt acg tgg cag gcc agt ggt cct cct gag	1719
att ata tta ttt gat cct gat gga cga aaa tac tac aca aat aat	1764
ttt atc acc aat cta act ttt cg ^g aca gct agt ctt tgg att cca	1809
gga aca gct aag cct ggg cac tgg act tac acc ctg aac aat acc	1854
cat cat tct ctg caa gcc ctg aaa gtg aca gtg acc tct cgc gcc	1899
tcc aac tca gct gtg ccc cca gcc act gtg gaa gcc ttt gtg gaa	1944
aga gac agc ctc cat ttt cct cat cct gtg atg att tat gcc aat	1989
gtg aaa cag gga ttt tat ccc att ctt aat gcc act gtc act gcc	2034
aca gtt gag cca gag act gga gat cct gtt acg ctg aga ctc ctt	2079
gat gat gga gca ggt gct gat gtt ata aaa aat gat gga att tac	2124

Pauli sequence.txt

tcg agg tat ttt ttc tcc ttt gct gca aat ggt aga tat agc ttg 2169
aaa gtg cat gtc aat cac tct ccc agc ata agc acc cca gcc cac 2214
tct att cca ggg agt cat gct atg tat gta cca ggt tac aca gca 2259
aac ggt aat att cag atg aat gct cca agg aaa tca gta ggc aga 2304
aat gag gag gag cga aag tgg ggc ttt agc cga gtc agc tca gga 2349
ggc tcc ttt tca gtg ctg gga gtt cca gct ggc ccc cac cct gat 2394
gtg ttt cca cca tgc aaa att att gac ctg gaa gct gta aaa gta 2439
gaa gag gaa ttg acc cta tct tgg aca gca cct gga gaa gac ttt 2484
gat cag ggc cag gct aca agc tat gaa ata aga atg agt aaa agt 2529
cta cag aat atc caa gat gac ttt aac aat gct att tta gta aat 2574
aca tca aag cga aat cct cag caa gct ggc atc agg gag ata ttt 2619
acg ttc tca ccc cag att tcc acg aat gga cct gaa cat cag cca 2664
aat gga gaa aca cat gaa agc cac aga att tat gtt gca ata cga 2709
gca atg gat agg aac tcc tta cag tct gct gta tct aac att gcc 2754
cag gcg cct ctg ttt att ccc ccc aat tct gat cct gta cct gcc 2799
aga gat tat ctt ata ttg aaa gga gtt tta aca gca atg ggt ttg 2844
ata gga atc att tgc ctt att ata gtt gtg aca cat cat act tta 2889
agc agg aaa aag aga gca gac aag aaa gag aat gga aca aaa tta 2934
tta taaataaaata tccaaagtgt cttccttctc aaa 2970

<210> 32
<211> 943
<212> PRT
<213> Homo sapiens

<400> 32
Met Thr Gln Arg Ser Ile Ala Gly Pro Ile Cys Asn Leu Lys Phe
1 5 10 15

Pauli sequence.txt

Val	Thr	Leu	Leu	Val	Ala	Leu	Ser	Ser	Glu	Leu	Pro	Phe	Leu	Gly
				20					25					30
Ala	Gly	Val	Gln	Leu	Gln	Asp	Asn	Gly	Tyr	Asn	Gly	Leu	Leu	Ile
				35					40					45
Ala	Ile	Asn	Pro	Gln	Val	Pro	Glu	Asn	Gln	Asn	Leu	Ile	Ser	Asn
				50					55					60
Ile	Lys	Glu	Met	Ile	Thr	Glu	Ala	Ser	Phe	Tyr	Leu	Phe	Asn	Ala
				65					70					75
Thr	Lys	Arg	Arg	Val	Phe	Phe	Arg	Asn	Ile	Lys	Ile	Leu	Ile	Pro
				80					85					90
Ala	Thr	Trp	Lys	Ala	Asn	Asn	Asn	Ser	Lys	Ile	Lys	Gln	Glu	Ser
				95					100					105
Tyr	Glu	Lys	Ala	Asn	Val	Ile	Val	Thr	Asp	Trp	Tyr	Gly	Ala	His
				110					115					120
Gly	Asp	Asp	Pro	Tyr	Thr	Leu	Gln	Tyr	Arg	Gly	Cys	Gly	Lys	Glu
				125					130					135
Gly	Lys	Tyr	Ile	His	Phe	Thr	Pro	Asn	Phe	Leu	Leu	Asn	Asp	Asn
				140					145					150
Leu	Thr	Ala	Gly	Tyr	Gly	Ser	Arg	Gly	Arg	Val	Phe	Val	His	Glu
				155					160					165
Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	Asp	Glu	Tyr	Asn	Asn	Asp
				170					175					180
Lys	Pro	Phe	Tyr	Ile	Asn	Gly	Gln	Asn	Gln	Ile	Lys	Val	Thr	Arg
				185					190					195
Cys	Ser	Ser	Asp	Ile	Thr	Gly	Ile	Phe	Val	Cys	Glu	Lys	Gly	Pro
				200					205					210
Cys	Pro	Gln	Glu	Asn	Cys	Ile	Ile	Ser	Lys	Leu	Phe	Lys	Glu	Gly
				215					220					225
Cys	Thr	Phe	Ile	Tyr	Asn	Ser	Thr	Gln	Asn	Ala	Thr	Ala	Ser	Ile
				230					235					240
Met	Phe	Met	Gln	Ser	Leu	Ser	Ser	Val	Val	Glu	Phe	Cys	Asn	Ala
				245					250					255

Pauli sequence.txt

Ser	Thr	His	Asn	Gln	Glu	Ala	Pro	Asn	Leu	Gln	Asn	Gln	Met	Cys
				260					265					270
Ser	Leu	Arg	Ser	Ala	Trp	Asp	Val	Ile	Thr	Asp	Ser	Ala	Asp	Phe
	275								280					285
His	His	Ser	Phe	Pro	Met	Asn	Gly	Thr	Glu	Leu	Pro	Pro	Pro	Pro
	290								295					300
Thr	Phe	Ser	Leu	Val	Gln	Ala	Gly	Asp	Lys	Val	Val	Cys	Leu	Val
	305								310					315
Leu	Asp	Val	Ser	Ser	Lys	Met	Ala	Glu	Ala	Asp	Arg	Leu	Leu	Gln
	320								325					330
Leu	Gln	Gln	Ala	Ala	Glu	Phe	Tyr	Leu	Met	Gln	Ile	Val	Glu	Ile
	335								340					345
His	Thr	Phe	Val	Gly	Ile	Ala	Ser	Phe	Asp	Ser	Lys	Gly	Glu	Ile
	350								355					360
Arg	Ala	Gln	Leu	His	Gln	Ile	Asn	Ser	Asn	Asp	Asp	Arg	Lys	Leu
	365								370					375
Leu	Val	Ser	Tyr	Leu	Pro	Thr	Thr	Val	Ser	Ala	Lys	Thr	Asp	Ile
	380								385					390
Ser	Ile	Cys	Ser	Gly	Leu	Lys	Lys	Gly	Phe	Glu	Val	Val	Glu	Lys
	395								400					405
Leu	Asn	Gly	Lys	Ala	Tyr	Gly	Ser	Val	Met	Ile	Leu	Val	Thr	Ser
	410								415					420
Gly	Asp	Asp	Lys	Leu	Leu	Gly	Asn	Cys	Leu	Pro	Thr	Val	Leu	Ser
	425								430					435
Ser	Gly	Ser	Thr	Ile	His	Ser	Ile	Ala	Leu	Gly	Ser	Ser	Ala	Ala
	440								445					450
Pro	Asn	Leu	Glu	Glu	Leu	Ser	Arg	Leu	Thr	Gly	Gly	Leu	Lys	Phe
	455								460					465
Phe	Val	Pro	Asp	Ile	Ser	Asn	Ser	Asn	Ser	Met	Ile	Asp	Ala	Phe
	470								475					480
Ser	Arg	Ile	Ser	Ser	Gly	Thr	Gly	Asp	Ile	Phe	Gln	Gln	His	Ile
	485								490					495

Pauli sequence.txt

Gln	Leu	Glu	Ser	Thr	Gly	Glu	Asn	Val	Lys	Pro	His	His	Gln	Leu
				500					505					510
Lys	Asn	Thr	Val	Thr	Val	Asp	Asn	Thr	Val	Gly	Asn	Asp	Ile	Met
				515					520					525
Phe	Leu	Val	Thr	Trp	Gln	Ala	Ser	Gly	Pro	Pro	Glu	Ile	Ile	Leu
				530					535					540
Phe	Asp	Pro	Asp	Gly	Arg	Lys	Tyr	Tyr	Thr	Asn	Asn	Phe	Thr	Thr
				545					550					555
Asn	Leu	Thr	Phe	Arg	Thr	Ala	Ser	Leu	Trp	Ile	Pro	Gly	Thr	Ala
				560					565					570
Lys	Pro	Gly	His	Trp	Thr	Tyr	Thr	Leu	Asn	Asn	Thr	His	His	Ser
				575					580					585
Leu	Gln	Ala	Leu	Lys	Val	Thr	Val	Thr	Ser	Arg	Ala	Ser	Asn	Ser
				590					595					600
Ala	Val	Pro	Pro	Ala	Thr	Val	Glu	Ala	Phe	Val	Glu	Arg	Asp	Ser
				605					610					615
Leu	His	Phe	Pro	His	Pro	Val	Met	Ile	Tyr	Ala	Asn	Val	Lys	Gln
				620					625					630
Gly	Phe	Tyr	Pro	Ile	Ile	Asn	Ala	Thr	Val	Thr	Ala	Thr	Val	Glu
				635					640					645
Pro	Glu	Thr	Gly	Asp	Pro	Val	Thr	Leu	Arg	Leu	Leu	Asp	Asp	Gly
				650					655					660
Ala	Gly	Ala	Asp	Val	Ile	Lys	Asn	Asp	Gly	Ile	Tyr	Ser	Arg	Tyr
				665					670					675
Phe	Phe	Ser	Phe	Ala	Ala	Asn	Gly	Arg	Tyr	Ser	Leu	Lys	Val	His
				680					685					690
Val	Asn	His	Ser	Pro	Ser	Ile	Ser	Thr	Pro	Ala	His	Ser	Ile	Pro
				695					700					705
Gly	Ser	His	Ala	Met	Tyr	Val	Pro	Gly	Tyr	Thr	Ala	Asn	Gly	Asn
				710					715					720
Ile	Gln	Met	Asn	Ala	Pro	Arg	Lys	Ser	Val	Gly	Arg	Asn	Glu	Glu
				725					730					735

Pauli sequence.txt

Glu	Arg	Lys	Trp	Gly	Phe	Ser	Arg	Val	Ser	Ser	Gly	Gly	Ser	Phe
					740				745					750
Ser	Val	Leu	Gly	Val	Pro	Ala	Gly	Pro	His	Pro	Asp	Val	Phe	Pro
				755					760					765
Pro	Cys	Lys	Ile	Ile	Asp	Leu	Glu	Ala	Val	Lys	Val	Glu	Glu	Glu
				770					775					780
Leu	Thr	Leu	Ser	Trp	Thr	Ala	Pro	Gly	Glu	Asp	Phe	Asp	Gln	Gly
				785					790					795
Gln	Ala	Thr	Ser	Tyr	Glu	Ile	Arg	Met	Ser	Lys	Ser	Leu	Gln	Asn
				800					805					810
Ile	Gln	Asp	Asp	Phe	Asn	Asn	Ala	Ile	Leu	Val	Asn	Thr	Ser	Lys
				815					820					825
Arg	Asn	Pro	Gln	Gln	Ala	Gly	Ile	Arg	Glu	Ile	Phe	Thr	Phe	Ser
				830					835					840
Pro	Gln	Ile	Ser	Thr	Asn	Gly	Pro	Glu	His	Gln	Pro	Asn	Gly	Glu
				845					850					855
Thr	His	Glu	Ser	His	Arg	Ile	Tyr	Val	Ala	Ile	Arg	Ala	Met	Asp
				860					865					870
Arg	Asn	Ser	Leu	Gln	Ser	Ala	Val	Ser	Asn	Ile	Ala	Gln	Ala	Pro
				875					880					885
Leu	Phe	Ile	Pro	Pro	Asn	Ser	Asp	Pro	Val	Pro	Ala	Arg	Asp	Tyr
				890					895					900
Leu	Ile	Leu	Lys	Gly	Val	Leu	Thr	Ala	Met	Gly	Leu	Ile	Gly	Ile
				905					910					915
Ile	Cys	Leu	Ile	Ile	Val	Val	Thr	His	His	Thr	Leu	Ser	Arg	Lys
				920					925					930
Lys	Arg	Ala	Asp	Lys	Lys	Glu	Asn	Gly	Thr	Lys	Leu	Leu		
				935					940					943

<210> 33

<211> 3022

<212> DNA

<213> Mus musculus

<400> 33

Pauli sequence.txt

actggagcag	tgcgacc	atg	gtg	cca	ggg	ctg	cag	gtc	ctt	ctg	ttc	47			
ctc	acc	ctg	cat	ctc	ctg	cag	aac	aca	gag	agc	tcc	atg	gtg	cat	92
ctc	aac	agc	aat	gga	tac	gag	ggt	gtg	gtc	att	gcc	att	aac	ccc	137
agt	gtg	cca	gag	gac	gaa	agg	ctc	atc	cca	agc	ata	aag	gaa	atg	182
gta	act	caa	gct	tct	acc	tac	ctg	ttt	gaa	gcc	agc	caa	gga	aga	227
gtt	tat	ttc	agg	aac	ata	agc	ata	tta	gtc	ccg	atg	acc	tgg	aag	272
tcg	aaa	tct	gag	tac	tta	atg	cca	aaa	cga	gaa	tcg	tac	gac	aaa	317
gca	gac	gtc	ata	gtt	gcg	gat	cct	cac	ctg	caa	cat	gga	gac	gac	362
ccc	tac	acc	ctt	cag	tat	gga	cag	tgt	ggg	gac	aga	gga	cag	tac	407
ata	cac	ttc	act	cca	aac	ttc	cta	ctc	act	gat	aac	ttg	cgt	atc	452
tat	gga	ccc	cga	ggc	aga	gtc	ttt	gtc	cat	gag	tgg	gcc	cat	ctc	497
cg ^g	tgg	gga	gta	ttt	gat	gag	tat	aac	gtg	gac	cg ^g	tca	ctt	tac	542
att	tct	aga	aag	aac	act	ata	gaa	gca	aca	agg	tgc	tcc	gcc	agc	587
atc	aca	ggc	aag	aag	gtg	gtc	cac	gag	tgt	cag	aga	ggc	agc	tgt	632
gtg	aca	agg	gcg	tgc	cg ^g	cgt	gac	tcg	aag	aca	cg ^g	ctg	tat	gaa	677
ccc	aaa	tgt	aca	ttt	atc	cca	gac	aaa	ata	cag	aca	gct	ggg	gcc	722
tcc	ata	atg	ttc	atg	caa	aac	ctc	aat	tct	gtg	gtt	gaa	ttt	tgc	767
aca	gaa	aat	aac	cac	aat	gca	gaa	gcc	cca	aac	cta	caa	aac	aaa	812
atg	tgc	aat	cgc	aga	agc	acg	tgg	gat	gta	atc	aag	acg	tct	gct	857
gac	ttt	cag	aat	gcc	cct	ccc	atg	aga	gga	aca	gaa	gcc	cct	cct	902
cca	cct	aca	ttt	tat	ctg	ctc	aag	tcc	aga	agg	cga	gtg	gtg	tgc	947
ttg	gtg	ctg	gat	aaa	tct	gga	agc	atg	gac	aaa	gaa	gac	cgt	ctt	992
att	cga	atg	aat	caa	gca	gca	gaa	ctg	tac	tta	act	caa	att	gtg	1037
gaa	aag	gag	tct	atg	gtt	gga	tta	gtc	aca	ttt	gac	agc	gct	gcc	1082

Pauli sequence.txt

cac atc caa aat tat cta ata aaa ata acg agt agt gac tac	1127
caa aag atc acc gca aac ctc ccc caa cag gct tct ggt gga act	1172
tca att tgc cat gga ctc cag gca gga ttt cag gca att acc tcc	1217
agt gac cag agc act tcc ggt tct gag atc gta ttg ctg aca gat	1262
ggg gaa gat aat gga ata cgt tcc tgc ttt gag gcc gtc tct cgc	1307
agc ggt gcc atc atc cac acc atc gct ctg ggg cct tcg cgt gcc	1352
cga gaa ctg gag act ctg tcg gac atg aca gga ggg ctt cgt ttc	1397
tat gcc aac aaa gac cta aac agc ctt atc gat gct ttc agt aga	1442
att tca tct aca agt ggc agc gtc tcc cag cag gct ctg cag ttg	1487
gag agc aaa gcc ttc gat gtc aga gca ggg gca tgg ata aac ggt	1532
aca gta cct ctg gac agt acc gtc ggc aac gac acg ttc ttt gtt	1577
atc acc tgg atg gta aaa aag cca gaa atc att ctt caa gat cca	1622
aaa gga aaa aaa tat aca acc tca gat ttc caa gat gat aaa cta	1667
aac atc cgg tct gct aga ctt caa ata ccg ggc act gca gag aca	1712
ggt act tgg act tac agc tac acg ggt acc aag tct cag ttg att	1757
aca atg aca gtg acc act cga gca aga agt ccc acc atg gaa cca	1802
ctc ctg ggc tac tgc tac atg agt cag agc aca gcc cag tac cct	1847
agc cgg atg att gtg tac gca cgg gtc agc caa gga ttt ttg cct	1892
gtt ctg gga gcc aat gtc aca gcc ctc ata gaa gct gaa cat gga	1937
cat caa gtc acc ttg gag ctc tgg gac aat ggg gca ggt gct gat	1982
atc gtt aaa aat gat ggc atc tac aca aga tac ttt aca gat tat	2027
cat gga aat ggt aga tac agc cta aaa gtg cgt gtc cag gca caa	2072
aga aac aaa acc aga ctg agc tta aga cag aag aac aag tct tta	2117
tat ata cct ggc tat gtg gaa aat ggt aaa att gta ctg aat cca	2162

Pauli sequence.txt

ccc aga cca gat gtc caa gaa gaa gcc ata gaa gct aca gtg gaa 2207
gac ttc aac aga gta acc tct gga ggg tcg ttt act gtg tct gga 2252
gcg ccc cct gat ggc gac cac gct cgt gtg ttc cca cca agt aaa 2297
gtc aca gac ctg gag gct gag ttt ata ggt gat tat att cac ctt 2342
aca tgg acg gcc cct ggc aag gtt ctc gac aat gga aga gca cat 2387
aga tac atc atc aga atg agc cag cat cct ctg gat ctc caa gaa 2432
gat ttt aac aat gct act tta gtg aat gct tcc agt ctg ata cct 2477
aaa gaa gct ggc tca aaa gaa gca ttt aaa ttc aaa cca gaa act 2522
ttt aaa ata gca aat ggc atc cag ctc tac att gca atc cag gca 2567
gac aat gaa gcc agt ctc acc tct gag gtc tcc aac atc gca cag 2612
gct gtc aag ctt act tct cta gaa gat agt atc tct gca ctg ggt 2657
gat gat att tct gca atc tct atg aca att tgg ggg tta act gtg 2702
att ttt aac tct att tta aac tagaagatag aatggcacta 2743
aaatgcaatc ctgtacatat ttgctaagtg ttgctttaga atgtctttac 2793
tacacactca aaggctgcct gtcaacaatt gtaatataga agttcatatt 2843
caaagttgaa aatcccgagt tactaacaca attctttgc tatatgtaga 2893
tcaagattaa cagttcctca ttcaatttct taattgttcc atttactatg 2943
gaaataagat atccattctc tttcacagt gtgatgcaag ttcactttgt 2993
atatgaaaat aaaaaatttg tacaactcg 3022

<210> 34

<211> 902

<212> PRT

<213> Mus musculus

<400> 34

Met Val Pro Gly Leu Gln Val Leu Leu Phe Leu Thr Leu His Leu
5 10 15

Leu Gln Asn Thr Glu Ser Ser Met Val His Leu Asn Ser Asn Gly

Pauli sequence.txt

20	25	30
Tyr Glu Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp		
35	40	45
Glu Arg Leu Ile Pro Ser Ile Lys Glu Met Val Thr Gln Ala Ser		
50	55	60
Thr Tyr Leu Phe Glu Ala Ser Gln Gly Arg Val Tyr Phe Arg Asn		
65	70	75
Ile Ser Ile Leu Val Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr		
80	85	90
Leu Met Pro Lys Arg Glu Ser Tyr Asp Lys Ala Asp Val Ile Val		
95	100	105
Ala Asp Pro His Leu Gln His Gly Asp Asp Pro Tyr Thr Leu Gln		
110	115	120
Tyr Gly Gln Cys Gly Asp Arg Gly Gln Tyr Ile His Phe Thr Pro		
125	130	135
Asn Phe Leu Leu Thr Asp Asn Leu Arg Ile Tyr Gly Pro Arg Gly		
140	145	150
Arg Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe		
155	160	165
Asp Glu Tyr Asn Val Asp Arg Ser Pro Tyr Ile Ser Arg Lys Asn		
170	175	180
Thr Ile Glu Ala Thr Arg Cys Ser Ala Ser Ile Thr Gly Lys Lys		
185	190	195
Val Val His Glu Cys Gln Arg Gly Ser Cys Val Thr Arg Ala Cys		
200	205	210
Arg Arg Asp Ser Lys Thr Arg Leu Tyr Glu Pro Lys Cys Thr Phe		
215	220	225
Ile Pro Asp Lys Ile Gln Thr Ala Gly Ala Ser Ile Met Phe Met		
230	235	240
Gln Asn Leu Asn Ser Val Val Glu Phe Cys Thr Glu Asn Asn His		
245	250	255
Asn Ala Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Arg Arg		

Pauli sequence.txt

260	265	270
Ser Thr Trp Asp Val Ile Lys Thr Ser Ala Asp Phe Gln Asn Ala 275	280	285
Pro Pro Met Arg Gly Thr Glu Ala Pro Pro Pro Pro Thr Phe Tyr 290	295	300
Leu Leu Lys Ser Arg Arg Arg Val Val Cys Leu Val Leu Asp Lys 305	310	315
Ser Gly Ser Met Asp Lys Glu Asp Arg Leu Ile Arg Met Asn Gln 320	325	330
Ala Ala Glu Leu Tyr Leu Thr Gln Ile Val Glu Lys Glu Ser Met 335	340	345
Val Gly Leu Val Thr Phe Asp Ser Ala Ala His Ile Gln Asn Tyr 350	355	360
Leu Ile Lys Ile Thr Ser Ser Ser Asp Tyr Gln Lys Ile Thr Ala 365	370	375
Asn Leu Pro Gln Gln Ala Ser Gly Gly Thr Ser Ile Cys His Gly 380	385	390
Leu Gln Ala Gly Phe Gln Ala Ile Thr Ser Ser Asp Gln Ser Thr 395	400	405
Ser Gly Ser Glu Ile Val Leu Leu Thr Asp Gly Glu Asp Asn Gly 410	415	420
Ile Arg Ser Cys Phe Glu Ala Val Ser Arg Ser Gly Ala Ile Ile 425	430	435
His Thr Ile Ala Leu Gly Pro Ser Arg Ala Arg Glu Leu Glu Thr 440	445	450
Leu Ser Asp Met Thr Gly Gly Leu Arg Phe Tyr Ala Asn Lys Asp 455	460	465
Leu Asn Ser Leu Ile Asp Ala Phe Ser Arg Ile Ser Ser Thr Ser 470	475	480
Gly Ser Val Ser Gln Gln Ala Leu Gln Leu Glu Ser Lys Ala Phe 485	490	495
Asp Val Arg Ala Gly Ala Trp Ile Asn Gly Thr Val Pro Leu Asp		

Pauli sequence.txt

500	505	510
-----	-----	-----

Ser Thr Val Gly Asn Asp Thr Phe Phe Val Ile Thr Trp Met Val
 515 520 525

Lys Lys Pro Glu Ile Ile Leu Gln Asp Pro Lys Gly Lys Lys Tyr
 530 535 540

Thr Thr Ser Asp Phe Gln Asp Asp Lys Leu Asn Ile Arg Ser Ala
 545 550 555

Arg Leu Gln Ile Pro Gly Thr Ala Glu Thr Gly Thr Trp Thr Tyr
 560 565 570

Ser Tyr Thr Gly Thr Lys Ser Gln Leu Ile Thr Met Thr Val Thr
 575 580 585

Thr Arg Ala Arg Ser Pro Thr Met Glu Pro Leu Leu Gly Tyr Cys
 590 595 600

Tyr Met Ser Gln Ser Thr Ala Gln Tyr Pro Ser Arg Met Ile Val
 605 610 615

Tyr Ala Arg Val Ser Gln Gly Phe Leu Pro Val Leu Gly Ala Asn
 620 625 630

Val Thr Ala Leu Ile Glu Ala Glu His Gly His Gln Val Thr Leu
 635 640 645

Glu Leu Trp Asp Asn Gly Ala Gly Ala Asp Ile Val Lys Asn Asp
 650 655 660

Gly Ile Tyr Thr Arg Tyr Phe Thr Asp Tyr His Gly Asn Gly Arg
 665 670 675

Tyr Ser Leu Lys Val Arg Val Gln Ala Gln Arg Asn Lys Thr Arg
 680 685 690

Leu Ser Leu Arg Gln Lys Asn Lys Ser Leu Tyr Ile Pro Gly Tyr
 695 700 705

Val Glu Asn Gly Lys Ile Val Leu Asn Pro Pro Arg Pro Asp Val
 710 715 720

Gln Glu Glu Ala Ile Glu Ala Thr Val Glu Asp Phe Asn Arg Val
 725 730 735

Thr Ser Gly Gly Ser Phe Thr Val Ser Gly Ala Pro Pro Asp Gly

Pauli sequence.txt

740	745	750
Asp His Ala Arg Val Phe Pro Pro Ser Lys Val Thr Asp Leu Glu		
755	760	765
Ala Glu Phe Ile Gly Asp Tyr Ile His Leu Thr Trp Thr Ala Pro		
770	775	780
Gly Lys Val Leu Asp Asn Gly Arg Ala His Arg Tyr Ile Ile Arg		
785	790	795
Met Ser Gln His Pro Leu Asp Leu Gln Glu Asp Phe Asn Asn Ala		
800	805	810
Thr Leu Val Asn Ala Ser Ser Leu Ile Pro Lys Glu Ala Gly Ser		
815	820	825
Lys Glu Ala Phe Lys Phe Lys Pro Glu Thr Phe Lys Ile Ala Asn		
830	835	840
Gly Ile Gln Leu Tyr Ile Ala Ile Gln Ala Asp Asn Glu Ala Ser		
845	850	855
Leu Thr Ser Glu Val Ser Asn Ile Ala Gln Ala Val Lys Leu Thr		
860	865	870
Ser Leu Glu Asp Ser Ile Ser Ala Leu Gly Asp Asp Ile Ser Ala		
875	880	885
Ile Ser Met Thr Ile Trp Gly Leu Thr Val Ile Phe Asn Ser Ile		
890	895	900
Leu Asn		
902		

<210> 35
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 35
gaacccttgcc aggggccc 18

<210> 36
<211> 22

Pauli sequence.txt

<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 36
ccacgtgctt ctgcgattgc ac 22

<210> 37
<211> 31
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 37
gcggccgcaa tggggccatt taagagttct g 31

<210> 38
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 38
gcggccgcag ccctaggcta ttgacagctg 30

<210> 39
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 39
agaatcaaga tgaacacaga actc 24

<210> 40
<211> 26
<212> DNA
<213> Artificial sequence

Pauli sequence.txt

<220>
<223> Amplification primer

<400> 40
caaggtattt cacaacttat gacacg 26

<210> 41
<211> 29
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 41
gcggccgcta caacatgacc caaaggagc 29

<210> 42
<211> 43
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 42
gcggccgcga cactttggat atttatttat aataatttg ttc 43

<210> 43
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 43
cctttatgtt ttgaatgag 19

<210> 44
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

Pauli sequence.txt

<400> 44
caactatgac atctgcctgg tc 22

<210> 45
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> Amplification primer

<400> 45
cacaaagcta ggctaagtca agaac 25

<210> 46
<211> 903
<212> PRT
<213> Unknown

<220>
<223> Calcium sensitive chloride channel from bovine tracheal epithelium (Cunningham et al., 1995, J. Biol Chem., 270:31016-31026)

<400> 46

Met	Val	Pro	Arg	Leu	Thr	Val	Ile	Leu	Phe	Leu	Thr	Leu	His	Leu
														15
Leu	Pro	Gly	Met	Lys	Ser	Ser	Met	Val	Asn	Leu	Ile	Asn	Asn	Gly
														30
Tyr	Asp	Gly	Ile	Val	Ile	Ala	Ile	Asn	Pro	Ser	Val	Pro	Glu	Asp
														45
Glu	Lys	Leu	Ile	Gln	Asn	Ile	Lys	Glu	Met	Val	Thr	Glu	Ala	Ser
														60
Thr	Tyr	Leu	Phe	His	Ala	Thr	Lys	Arg	Arg	Val	Tyr	Phe	Arg	Asn
														75
Val	Ser	Ile	Leu	Ile	Pro	Met	Thr	Trp	Lys	Ser	Lys	Ser	Glu	Tyr
														90
Leu	Met	Pro	Lys	Gln	Glu	Ser	Tyr	Asp	Gln	Ala	Glu	Val	Ile	Val
														105
Ala	Asn	Pro	Tyr	Leu	Lys	His	Gly	Asp	Asp	Pro	Tyr	Thr	Leu	Gln
														120

Pauli sequence.txt

Tyr Gly Arg Cys Gly Glu Lys Gly Gln Tyr Ile His Phe Thr Pro
125 130 135

Asn Phe Leu Leu Thr Asn Asn Leu Pro Ile Tyr Gly Ser Arg Gly
140 145 150

Arg Ala Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe
155 160 165

Asp Glu Tyr Asn Gly Asp Gln Pro Phe Tyr Ile Ser Arg Arg Asn
170 175 180

Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr Gly Thr Asn
185 190 195

Val Ile Val Lys Cys Gln Gly Ser Cys Ile Thr Arg Pro Cys
200 205 210

Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr Phe
215 220 225

Ile Pro Glu Lys Ser Gln Thr Ala Arg Glu Ser Ile Met Phe Met
230 235 240

Gln Ser Leu His Ser Val Thr Glu Phe Cys Thr Glu Lys Thr His
245 250 255

Asn Val Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Gly Lys
260 265 270

Ser Thr Trp Asp Val Ile Met Asn Ser Thr Asp Phe Gln Asn Thr
275 280 285

Ser Pro Met Thr Glu Met Asn Pro Pro Thr Gln Pro Thr Phe Ser
290 295 300

Leu Leu Lys Ser Lys Gln Arg Val Val Cys Leu Val Leu Asp Lys
305 310 315

Ser Gly Ser Met Ser Ser Glu Asp Arg Leu Phe Arg Met Asn Gln
320 325 330

Ala Ala Glu Leu Phe Leu Ile Gln Ile Ile Glu Lys Gly Ser Leu
335 340 345

Val Gly Met Val Thr Phe Asp Ser Val Ala Glu Ile Arg Asn Asn
350 355 360

Pauli sequence.txt

Leu Thr Lys Ile Thr Asp Asp Asn Val Tyr Glu Asn Ile Thr Ala
365 370 375

Asn Leu Pro Gln Glu Ala Asn Gly Gly Thr Ser Ile Cys Arg Gly
380 385 390

Leu Lys Ala Gly Phe Gln Ala Ile Ile Gln Ser Gln Gln Ser Thr
395 400 405

Ser Gly Ser Glu Ile Ile Leu Leu Thr Asp Gly Glu Asp Asn Glu
410 415 420

Ile His Ser Cys Ile Glu Glu Val Lys Gln Ser Gly Val Ile Ile
425 430 435

His Thr Val Ala Leu Gly Pro Ser Ala Ala Lys Glu Leu Glu Thr
440 445 450

Leu Ser Asp Met Thr Gly Gly His Arg Phe Tyr Ala Asn Lys Asp
455 460 465

Ile Asn Gly Leu Thr Asn Ala Phe Ser Arg Ile Ser Ser Arg Ser
470 475 480

Gly Ser Ile Thr Gln Gln Thr Ile Gln Leu Glu Ser Lys Ala Leu
485 490 495

Ala Ile Thr Glu Lys Lys Trp Val Asn Gly Thr Val Pro Val Asp
500 505 510

Ser Thr Ile Gly Asn Asp Thr Phe Phe Val Val Thr Trp Thr Ile
515 520 525

Lys Lys Pro Glu Ile Leu Leu Gln Asp Pro Lys Gly Lys Lys Tyr
530 535 540

Lys Thr Ser Asp Phe Lys Glu Asp Lys Leu Asn Ile His Ser Ala
545 550 555

Arg Leu Arg Ile Pro Gly Ile Ala Glu Thr Gly Thr Trp Thr Tyr
560 565 570

Ser Leu Leu Asn Asn His Ala Ser Pro Gln Ile Leu Thr Val Thr
575 580 585

Val Thr Thr Arg Ala Arg Ser Pro Thr Thr Pro Pro Val Thr Ala
590 595 600

Pauli sequence.txt

Thr Ala His Met Asn Gln Asn Thr Ala His Tyr Pro Ser Pro Val
605 610 615

Ile Val Tyr Ala Gln Val Ser Gln Gly Phe Leu Pro Val Leu Gly
620 625 630

Ile Asn Val Thr Ala Ile Ile Glu Thr Glu Asp Gly His Gln Val
635 640 645

Thr Leu Glu Leu Trp Asp Asn Gly Ala Gly Ala Asp Ala Thr Lys
650 655 660

Asp Asp Gly Val Tyr Ser Arg Tyr Phe Thr Thr Tyr Asp Thr Asn
665 670 675

Gly Arg Tyr Ser Val Lys Val His Ala Glu Ala Arg Asn Asn Thr
680 685 690

Ala Arg Leu Ser Leu Arg Gln Pro Gln Asn Lys Ala Leu Tyr Ile
695 700 705

Pro Gly Tyr Ile Glu Asn Gly Lys Ile Ile Leu Asn Pro Pro Arg
710 715 720

Pro Glu Val Lys Asp Asp Leu Ala Lys Ala Glu Ile Glu Asp Phe
725 730 735

Ser Arg Leu Thr Ser Gly Gly Ser Phe Thr Val Ser Gly Ala Pro
740 745 750

Pro Gly Asn His Pro Ser Val Leu Pro Pro Asn Lys Ile Thr Asp
755 760 765

Leu Glu Ala Lys Phe Lys Glu Asp His Ile Gln Leu Ser Trp Thr
770 775 780

Ala Pro Ala Asn Val Leu Asp Lys Gly Lys Ala Asn Ser Tyr Ile
785 790 795

Ile Arg Ile Ser Lys Ser Phe Leu Asp Leu Gln Lys Asp Phe Asp
800 805 810

Asn Ala Thr Leu Val Asn Thr Ser Ser Leu Lys Pro Lys Glu Ala
815 820 825

Gly Ser Asp Glu Asn Phe Glu Phe Lys Pro Glu Pro Phe Arg Ile
830 835 840

Pauli sequence.txt

Glu Asn Gly Thr Asn Phe Tyr Ile Ala Val Gln Ala Ile Asn Glu
845 850 855

Ala Asn Leu Thr Ser Glu Val Ser Asn Ile Ala Gln Ala Ile Lys
860 865 870

Phe Ile Pro Met Pro Glu Asp Ser Val Pro Ala Leu Gly Thr Lys
875 880 885

Ile Ser Ala Ile Asn Leu Ala Ile Phe Ala Leu Ala Met Ile Leu
890 895 900

Ser Ile Val
903

<210> 47

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<223> partial sequence of human c-myc protein

<400> 47

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
5 10

<210> 48

<211> 675

<212> PRT

<213> homo sapiens

<220>

<223> amino acids 1-675 of SEQ ID NO:32 which make up putative 90 kDa subunit of hCLCA2

<400> 48

Met Thr Gln Arg Ser Ile Ala Gly Pro Ile Cys Asn Leu Lys Phe
1 5 10 15

Val Thr Leu Leu Val Ala Leu Ser Ser Glu Leu Pro Phe Leu Gly
20 25 30

Ala Gly Val Gln Leu Gln Asp Asn Gly Tyr Asn Gly Leu Leu Ile
35 40 45

Ala Ile Asn Pro Gln Val Pro Glu Asn Gln Asn Leu Ile Ser Asn
50 55 60

Pauli sequence.txt

Ile	Lys	Glu	Met	Ile	Thr	Glu	Ala	Ser	Phe	Tyr	Leu	Phe	Asn	Ala
				65					70					75
Thr	Lys	Arg	Arg	Val	Phe	Phe	Arg	Asn	Ile	Lys	Ile	Leu	Ile	Pro
				80				85						90
Ala	Thr	Trp	Lys	Ala	Asn	Asn	Asn	Ser	Lys	Ile	Lys	Gln	Glu	Ser
				95					100					105
Tyr	Glu	Lys	Ala	Asn	Val	Ile	Val	Thr	Asp	Trp	Tyr	Gly	Ala	His
				110				115						120
Gly	Asp	Asp	Pro	Tyr	Thr	Leu	Gln	Tyr	Arg	Gly	Cys	Gly	Lys	Glu
				125				130						135
Gly	Lys	Tyr	Ile	His	Phe	Thr	Pro	Asn	Phe	Leu	Leu	Asn	Asp	Asn
				140				145						150
Leu	Thr	Ala	Gly	Tyr	Gly	Ser	Arg	Gly	Arg	Val	Phe	Val	His	Glu
				155				160						165
Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	Asp	Glu	Tyr	Asn	Asn	Asp
				170				175						180
Lys	Pro	Phe	Tyr	Ile	Asn	Gly	Gln	Asn	Gln	Ile	Lys	Val	Thr	Arg
				185				190						195
Cys	Ser	Ser	Asp	Ile	Thr	Gly	Ile	Phe	Val	Cys	Glu	Lys	Gly	Pro
				200				205						210
Cys	Pro	Gln	Glu	Asn	Cys	Ile	Ile	Ser	Lys	Leu	Phe	Lys	Glu	Gly
				215				220						225
Cys	Thr	Phe	Ile	Tyr	Asn	Ser	Thr	Gln	Asn	Ala	Thr	Ala	Ser	Ile
				230				235						240
Met	Phe	Met	Gln	Ser	Leu	Ser	Ser	Val	Val	Glu	Phe	Cys	Asn	Ala
				245				250						255
Ser	Thr	His	Asn	Gln	Glu	Ala	Pro	Asn	Leu	Gln	Asn	Gln	Met	Cys
				260				265						270
Ser	Leu	Arg	Ser	Ala	Trp	Asp	Val	Ile	Thr	Asp	Ser	Ala	Asp	Phe
				275				280						285
His	His	Ser	Phe	Pro	Met	Asn	Gly	Thr	Glu	Leu	Pro	Pro	Pro	Pro
				290				295						300

Pauli sequence.txt

Thr Phe Ser Leu Val Gln Ala Gly Asp Lys Val Val Cys Leu Val
305 310 315

Leu Asp Val Ser Ser Lys Met Ala Glu Ala Asp Arg Leu Leu Gln
320 325 330

Leu Gln Gln Ala Ala Glu Phe Tyr Leu Met Gln Ile Val Glu Ile
335 340 345

His Thr Phe Val Gly Ile Ala Ser Phe Asp Ser Lys Gly Glu Ile
350 355 360

Arg Ala Gln Leu His Gln Ile Asn Ser Asn Asp Asp Arg Lys Leu
365 370 375

Leu Val Ser Tyr Leu Pro Thr Thr Val Ser Ala Lys Thr Asp Ile
380 385 390

Ser Ile Cys Ser Gly Leu Lys Lys Gly Phe Glu Val Val Glu Lys
395 400 405

Leu Asn Gly Lys Ala Tyr Gly Ser Val Met Ile Leu Val Thr Ser
410 415 420

Gly Asp Asp Lys Leu Leu Gly Asn Cys Leu Pro Thr Val Leu Ser
425 430 435

Ser Gly Ser Thr Ile His Ser Ile Ala Leu Gly Ser Ser Ala Ala
440 445 450

Pro Asn Leu Glu Glu Leu Ser Arg Leu Thr Gly Gly Leu Lys Phe
455 460 465

Phe Val Pro Asp Ile Ser Asn Ser Asn Ser Met Ile Asp Ala Phe
470 475 480

Ser Arg Ile Ser Ser Gly Thr Gly Asp Ile Phe Gln Gln His Ile
485 490 495

Gln Leu Glu Ser Thr Gly Glu Asn Val Lys Pro His His Gln Leu
500 505 510

Lys Asn Thr Val Thr Val Asp Asn Thr Val Gly Asn Asp Ile Met
515 520 525

Phe Leu Val Thr Trp Gln Ala Ser Gly Pro Pro Glu Ile Ile Leu
530 535 540

Pauli sequence.txt

Phe	Asp	Pro	Asp	Gly	Arg	Lys	Tyr	Tyr	Thr	Asn	Asn	Phe	Thr	Thr
				545					550					555
Asn	Leu	Thr	Phe	Arg	Thr	Ala	Ser	Leu	Trp	Ile	Pro	Gly	Thr	Ala
				560					565					570
Lys	Pro	Gly	His	Trp	Thr	Tyr	Thr	Leu	Asn	Asn	Thr	His	His	Ser
				575					580					585
Leu	Gln	Ala	Leu	Lys	Val	Thr	Val	Thr	Ser	Arg	Ala	Ser	Asn	Ser
				590					595					600
Ala	Val	Pro	Pro	Ala	Thr	Val	Glu	Ala	Phe	Val	Glu	Arg	Asp	Ser
				605					610					615
Leu	His	Phe	Pro	His	Pro	Val	Met	Ile	Tyr	Ala	Asn	Val	Lys	Gln
				620					625					630
Gly	Phe	Tyr	Pro	Ile	Ile	Asn	Ala	Thr	Val	Thr	Ala	Thr	Val	Glu
				635					640					645
Pro	Glu	Thr	Gly	Asp	Pro	Val	Thr	Leu	Arg	Leu	Leu	Asp	Asp	Gly
				650					655					660
Ala	Gly	Ala	Asp	Val	Ile	Lys	Asn	Asp	Gly	Ile	Tyr	Ser	Arg	Tyr
				665					670					675

<210> 49

<211> 268

<212> PRT

<213> homo sapiens

<220>

<223> amino acids 676-943 of SEQ ID NO:32 which make up putative 35 kD a subunit of hCLCA2

<400> 49

Phe	Phe	Ser	Phe	Ala	Ala	Asn	Gly	Arg	Tyr	Ser	Leu	Lys	Val	His
1				5					10					15

Val	Asn	His	Ser	Pro	Ser	Ile	Ser	Thr	Pro	Ala	His	Ser	Ile	Pro
				20					25					30

Gly	Ser	His	Ala	Met	Tyr	Val	Pro	Gly	Tyr	Thr	Ala	Asn	Gly	Asn
				35					40					45

Pauli sequence.txt

Ile	Gln	Met	Asn	Ala	Pro	Arg	Lys	Ser	Val	Gly	Arg	Asn	Glu	Glu
					50				55					60
Glu	Arg	Lys	Trp	Gly	Phe	Ser	Arg	Val	Ser	Ser	Gly	Gly	Ser	Phe
					65				70					75
Ser	Val	Leu	Gly	Val	Pro	Ala	Gly	Pro	His	Pro	Asp	Val	Phe	Pro
					80				85					90
Pro	Cys	Lys	Ile	Ile	Asp	Leu	Glu	Ala	Val	Lys	Val	Glu	Glu	Glu
					95				100					105
Leu	Thr	Leu	Ser	Trp	Thr	Ala	Pro	Gly	Glu	Asp	Phe	Asp	Gln	Gly
					110				115					120
Gln	Ala	Thr	Ser	Tyr	Glu	Ile	Arg	Met	Ser	Lys	Ser	Leu	Gln	Asn
					125				130					135
Ile	Gln	Asp	Asp	Phe	Asn	Asn	Ala	Ile	Leu	Val	Asn	Thr	Ser	Lys
					140				145					150
Arg	Asn	Pro	Gln	Gln	Ala	Gly	Ile	Arg	Glu	Ile	Phe	Thr	Phe	Ser
					155				160					165
Pro	Gln	Ile	Ser	Thr	Asn	Gly	Pro	Glu	His	Gln	Pro	Asn	Gly	Glu
					170				175					180
Thr	His	Glu	Ser	His	Arg	Ile	Tyr	Val	Ala	Ile	Arg	Ala	Met	Asp
					185				190					195
Arg	Asn	Ser	Leu	Gln	Ser	Ala	Val	Ser	Asn	Ile	Ala	Gln	Ala	Pro
					200				205					210
Leu	Phe	Ile	Pro	Pro	Asn	Ser	Asp	Pro	Val	Pro	Ala	Arg	Asp	Tyr
					215				220					225
Leu	Ile	Leu	Lys	Gly	Val	Leu	Thr	Ala	Met	Gly	Leu	Ile	Gly	Ile
					230				235					240
Ile	Cys	Leu	Ile	Ile	Val	Val	Thr	His	His	Thr	Leu	Ser	Arg	Lys
					245				250					255
Lys	Arg	Ala	Asp	Lys	Lys	Glu	Asn	Gly	Thr	Lys	Leu	Leu		
					260				265					

<210> 50

<211> 10

Pauli sequence.txt

<212> PRT
<213> artificial sequence

<220>
<223>

<400> 50
Ala Phe Ser Arg Ile Ser Ser Gly Thr Gly
1 5 10

<210> 51
<211> 10
<212> PRT
<213> artificial sequence

<220>
<223>

<400> 51
Gly Phe Ser Arg Val Ser Ser Gly Gly Ser
1 5 10

<210> 52
<211> 10
<212> PRT
<213> artificial sequence

<220>
<223>

<400> 52
Cys Phe Ser Arg Val Ser Ser Gly Gly Ser
1 5 10

<210> 53
<211> 244
<212> PRT
<213> homo sapiens

<220>
<223>

<400> 53
Tyr Ser Val Lys Val Arg Ala Leu Gly Gly Val Asn Ala Ala Arg
1 5 10 15
Arg Arg Val Ile Pro Gln Gln Ser Gly Ala Leu Tyr Ile Pro Gly
20 25 30

Pauli sequence.txt

Trp Ile Glu Asn Asp Glu Ile Gln Trp Asn Pro Pro Arg Pro Glu
35 40 45

Ile Asn Lys Asp Asp Val Gln His Lys Gln Val Cys Phe Ser Arg
50 55 60

Thr Ser Ser Gly Gly Ser Phe Val Ala Ser Asp Val Pro Asn Ala
65 70 75

Pro Ile Pro Asp Leu Phe Pro Pro Gly Gln Ile Thr Asp Leu Lys
80 85 90

Ala Glu Ile His Gly Gly Ser Leu Ile Asn Leu Thr Trp Thr Ala
95 100 105

Pro Gly Asp Asp Tyr Asp His Gly Thr Ala His Lys Tyr Ile Ile
110 115 120

Arg Ile Ser Thr Ser Ile Leu Asp Leu Arg Asp Lys Phe Asn Glu
125 130 135

Ser Leu Gln Val Asn Thr Thr Ala Leu Ile Pro Lys Glu Ala Asn
140 145 150

Ser Glu Glu Val Phe Leu Phe Lys Pro Glu Asn Ile Thr Phe Glu
155 160 165

Asn Gly Thr Asp Leu Phe Ile Ala Ile Gln Ala Val Asp Lys Val
170 175 180

Asp Leu Lys Ser Glu Ile Ser Asn Ile Ala Arg Val Ser Leu Phe
185 190 195

Ile Pro Pro Gln Thr Pro Pro Glu Thr Pro Ser Pro Asp Glu Thr
200 205 210

Ser Ala Pro Cys Pro Asn Ile His Ile Asn Ser Thr Ile Pro Gly
215 220 225

Ile His Ile Leu Lys Ile Met Trp Lys Trp Ile Gly Glu Leu Gln
230 235 240

Leu Ser Ile Ala
244

<210> 54
<211> 10

Pauli sequence.txt

<212> PRT
<213> artificial sequence

<220>
<223>

<400> 54
Ala Phe Val Arg Ile Ser Ser Gly Thr Gly
1 5 10

<210> 55
<211> 10
<212> PRT
<213> artificial sequence

<220>
<223>

<400> 55
Ala Phe Ser Arg Ile Ser Ser Thr Ser Gly
1 5 10

<210> 56
<211> 10
<212> PRT
<213> artificial sequence

<220>
<223>

<400> 56
Asp Phe Asn Arg Val Thr Ser Gly Gly Ser
1 5 10

<210> 57
<211> 10
<212> PRT
<213> artificial sequence

<220>
<223>

<400> 57
Ala Phe Ser Arg Ile Ser Ser Arg Ser Gly
1 5 10

<210> 58
<211> 10

Pauli sequence.txt

<212> PRT

<213> artificial sequence

<220>

<223>

<400> 58

Asp Phe Ser Arg Leu Thr Ser Gly Gly Ser
1 5 10

<210> 59

<211> 10

<212> PRT

<213> artificial sequence

<220>

<223>

<400> 59

Ala Phe Gly Ala Leu Ser Ser Gly Asn Gly
1 5 10

<210> 60

<211> 35

<212> PRT

<213> homo sapiens

<220>

<223>

<400> 60

Lys Val Ser Val Phe Gln Thr Asp Met Arg Phe Glu Lys Leu Glu
1 5 10 15

Pro Trp Pro Asn Ser Asp Pro Pro Phe Ser Phe Lys Asn Val Ile
20 25 30

Ser Leu Thr Glu Asp

35

<210> 61

<211> 6

<212> PRT

<213> artificial sequence

<220>

<221> unsure

<222> 2, 4, 5; 2 is Ser or Asn, 4 is Ile or Leu or Val, 5 is Ser or Th
r

<223>

Pauli sequence.txt

<400> 61
Phe Xaa Arg Xaa Xaa Ser
1 5 6

<210> 62
<211> 39
<212> PRT
<213> homo sapiens

<220>
<223>

<400> 62
Lys Thr Val Met Pro Tyr Ile Ser Thr Thr Pro Ala Lys Leu Arg
1 5 10 15
Asn Pro Cys Thr Ser Gly Gln Asn Cys Thr Thr Pro Phe Ser Tyr
20 25 30
Lys Asn Val Leu Ser Leu Thr Asn Lys
35 39

<210> 63
<211> 40
<212> PRT
<213> E.coli

<220>
<223>

<400> 63
Glu Glu Glu Glu Cys Glu Glu Cys Cys Cys Cys Cys Cys Cys Cys
1 5 10 15
Cys
20 25 30
Cys Glu Glu Glu Glu Glu Cys Cys Cys Cys
35 40